

AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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Suggestions and Notes for the Month.

The glory of the year is at its height. There is a gorgeous display of color in the woods, which beautifully contrasts with the sombre hue of the cleared fields, though it is the hectic flush that betokens the completion of the decay which is already marring the landscape. The sun looks askant upon the changing scene, and is slowly transferring his favors to other lands; the birds, like gay courtiers, follow to enjoy his smiles; the hum of insects is no longer heard, they have sought safe quarters for their winter repose; a gentle haze fills the air, and all things inspire thoughtfulness. The reflections of the husbandman will naturally turn to a survey of the year's operations. In the main, the season has been one of average fruitfulness, though some complain of a late Spring and a too fervid Summer. The drouth, and the August frost completed the failure threatened in the early months. In some sections this was undoubtedly unavoidable. Human skill cannot make up for all deficiencies of weather. There will always be some contingencies depending on this cause, and these should be taken into account in estimating for future operations on the farm; a wide margin should be left on this score, when operations are contemplated requiring the outlay of large capital. He is an unskillful cultivator who depends entirely upon favorable seasons for making farming profitable. He is at the mercy of the elements, and will often have reason to complain of their inclemency. It is equally unwise to conduct agricultural operations with reference only to a single year or a short term of years. The successful man looks into the future, and lays his plans to make his land increasingly productive. He who merely strives to realize the largest returns, year by year, without keeping the future in view, may be

selling the fertility of his land piece-meal, which is in reality parting with his capital for what should be the basis of a large interest on that capital. The end of such management must ultimately be failure.—There is no operation upon the farm more fully justified than draining, in view of its immediate and permanent benefits. A thoroughly-drained field, though not independent of the weather, is provided with a regulating apparatus that will enable it to successfully withstand extremes which would destroy crops on undrained land. If the season be wet, there is a ready outlet for the surplus water; if drouth parches the surface, then the air permeating the cooler soil, leaves a supply of moisture for the wants of the growing plants. The atmosphere also contains elements needed for the building up of vegetable structure, and when the water has been drawn off, these find ready access to the roots. By the same means, deeper layers of earth are acted upon and prepared to furnish nutriment to the fibres, which will soon penetrate a soil thus fitted for their nourishment. Happily these views are no mere theories. They have been sustained by the most extended experiments in our own and in foreign countries. The English are so fully convinced of the benefits of draining, that it has been made a subject for legislation, and Government wisely aids those desirous of improving their estates, by loans on the most favorable terms. Most of our adult readers can remember when drain-tiles were first introduced in this country, as necessary to the best cultivation, and now there are thousands of acres made more productive by their use, and large manufactories, though working continually to supply the demand for tiles, are unable to keep up with the calls for them, and new parties are embarking in the business. We predict that in twenty years, or less, he will be generally considered an antiquated farmer, who has not introduced this improvement. The time may seem short, but we are a fast people, and are universally considered to be bent on "running things into the ground." The present is a favorable time for commencing or continuing this work. We counsel, as we have previously done repeatedly in the columns of the *Agriculturist*, that the work be begun, at least on a small scale, and there is little fear but that the results will so commend the operation that it will soon be very greatly extended.

Work for the Farm, Household, etc.

Take time by the forelock this month. But little growth will now be made by any summer crops, and without seasonable attention, some of them may be destroyed or injured by frost. In addition to gathering the corn, sorghum, roots, etc., preparations may be needed for safely storing them. To save a crop often requires as much forethought as to raise it. There should be a general clearing up before

the weather becomes inclement. The stable and cellars should be put in readiness, manure drawn out from the yards, ripened weeds gathered and burned, stock looked over and the surplus disposed of, tools safely housed, and everything made snug: then, when the blast comes whistling from the North, the farmer will be prepared to answer it with a cheerful whistle from within doors, surrounded with comfort and rejoicing in the sense of security.

Beans.—Thresh out as soon as sufficiently cured, and preserve the stalks for feeding to sheep or horses, for which they are good fodder.

Buildings will soon be subject to searching winds and driving storms, which will find entrance through all neglected crevices: one dollar's worth of lumber used in making them weather-proof will save many dollars in fuel and feed. See that eaves-troughs and leaders are free from leaves or other obstructions, and drains in order to carry off water. Apply paint where needed. If manure is to be thrown out of stable windows, build a shield of boards to keep it from contact with the sills and sides of the building and thus prevent their decay.

Butter.—Increase the quantity and quality by feeding the cows with pumpkins, surplus cabbage leaves, beet, carrot, and turnip tops, etc, as the pastures fail. Pack a full supply for winter use. If properly made, thoroughly worked, and stored with care, butter made now will command an extra price before Spring.

Cabbages.—Secure the late crop before injured by frost. Lay head downward in trenches, with rails at the bottom to keep them from the ground, cover with straw and then with earth, laid up in wedge shape and packed smooth, to shed rain. Feed out the surplus leaves.

Cattle.—Commence to feed with stalks or other fodder before the pastures are entirely bare. Grass partially nipped by frost loses much of its nutritive qualities, and will not fully supply their wants. Commence stall-feeding early. Provide shelter before the inclement season commences.

Cellars.—Prepare against freezing weather by banking up, if needed, but allow proper ventilation. Cement floors are neat, and will aid in preventing dampness and excluding vermin.

Carrots.—Harvest early and store in the barn, cellar, or other secure place, for feeding to stock in Winter. The tops, if in good order, are excellent for milch cows or other cattle.

Corn.—Cut up, bind, and stook for husking, or husk at once in the field, if it be not an object to save the fodder. See article on page 304.

Exhibitions.—Many of these are yet to be held, as will be seen by reference to the list published in another column. Strive to make that of your own vicinity one of the most successful. Those who might contribute on such

occasional, but who do not, are responsible for the failures of which they are the first to complain.

Farmers' Clubs.—Organize them early. One should be in operation in every school district. Secure an occasional address on agricultural subjects from competent speakers, but devote the meetings mainly to informal conversations on the facts connected with the every-day farm experience and observations of the different members: this will be of greater benefit in eliciting thought, and more interesting to the participants, than attempts at speech making, or listening to elaborate essays.

Grain.—Have all threshed and safely stored, ready to take advantage of a favorable market. Reduce all contracts for future delivery to writing, and ascertain the responsibility of parties before closing a bargain. Cash is the safest payment, the world over.

Hogs.—Push on fattening rapidly, before cold weather tithes the fat. Keep pens well supplied with pure water, and with plenty of leaves, weeds, straw, muck, etc., for making manure.

Ice-Houses may be made cheaply, and they will abundantly repay their cost, especially on dairy farms. A double-walled room with the interstices filled with sawdust or spent tan-bark, built in one corner of an out-house, provided with drainage and ventilation, are all the essentials.

Implements.—Have them all in their places under cover. Preserve iron and steel from rusting by thinly coating them over with a cheap mixture of lard and rosin melted together.

In-door Employments.—First secure all the labor-saving items for the household department, which may have long been waiting for a convenient time; such as a few hooks, pins or nails for hanging clothing, catches for loose doors, buttons or other fastenings for windows, convenient arrangement for water, scrapers for the doors, sharp knives and scissors, and all the hundred and one little matters which the women folks will think of, and which will contribute greatly to their good nature, and thus to the comfort of the household. A friend at hand proposes to the ladies, that they keep a slate or scrap of paper hanging in plain sight, and on it write a list of such needed improvements as they happen to want from time to time. It might be headed "Gentle Hints."

Manures.—In most sections a large addition can be made to the manure heap, by collecting leaves from the forest. They are excellent material to compost with cattle droppings for manure for the garden and fruit-yard. Provide sheds for the reception of the manure as it accumulates: it will be worth at least 25 per cent. more than if left exposed to the weather during the Winter. Secure a stock of lime and plaster to be used in making compost, and have an abundant supply of muck or black earth on hand for the same purpose.

Plow deeply heavy land that is intended for corn next year, and leave it exposed in ridges. The frost will pulverize the lumps and otherwise prepare it for working in Spring.

Potatoes.—Harvest and store immediately in a dark, cool, and well-ventilated cellar. A liberal amount of earth collected with them is rather beneficial than otherwise, in their preservation.

Poultry.—Provide warm, well-ventilated, and comfortable winter quarters. Keep their premises clean: occasionally pass their roosting poles through fire, to destroy vermin. Supply them with animal food as well as grain, and with plenty of clean water, gravel, and ashes to wallow in.

Pumpkins.—Store those wanted for family use in a dry, cool place, protected from frost. They may also be pared, sliced, and dried, or stewed and dried upon plates. Prepared in this way they will keep good a year or more. Remove the seeds from those fed to milch cows.

Root Crops.—Gather and store in cellars or pits out of doors before endangered by frost, commencing with carrots and ending with turnips, which are not injured by slight frosts.

Schools.—See that school-houses are in good order, and use every endeavor to secure first-class teachers. Arrange the work so that the boys may begin attendance at the commencement, to secure the advantage of early classification and of the additional time. Frequently examine as to their progress, but be in no haste to listen to "children's tales out of school."

Sheep.—Keep sheep and rams separate until five months before lambs are wanted. Keep all in good condition by occasional allowance of oats, if needed.

Sorghum.—Strip off leaves a few days before cutting the stalks. Cut off the two upper joints with seed, as soon as ripe, or before heavy frost, and cut stalks just above lower joint at the same time. Keep from freezing, and manufacture as rapidly as possible.

Orchard and Nursery.

October is a busy month in this department. Besides gathering the fruit in the established orchard, new plantings are to be made, and this causes demands upon the nurseryman and creates activity in his business. As far as we have noticed, the wood of nursery trees has made a good growth this season, and ripened well, and as soon as the leaves fall, transplanting may be done. In any soil fit for an orchard at all, Fall planting can be successfully practised. The earlier it is done after the fall of the leaf, the better, as the earth settles around the roots, and the tree becomes well established before Winter sets in. The success of planting trees at any time depends mainly on two things: the faithfulness of the nurseryman who furnishes the trees, and on that of the purchaser who plants them. Many failures result from the careless treatment of well grown and carefully taken up trees; other failures come from the careless manner in which the trees are treated in the nursery; they are so mutilated that no after care on the part of the purchaser will ever make healthy trees of them. In taking up trees in the nursery, care should be used to preserve the fibrous roots. It is very easy to take a sharp spade and cut around within a foot or so of the tree and then pry it out with its mutilated roots. To take up a tree properly, requires both time and labor. The surface soil should be carefully removed so as to expose the main branches of the roots and then each of these should be followed out and carefully lifted with all the attached fibres. In nurseries it is customary to take up a stock of those kinds which are most called for, and to heel them in, in a convenient place, so that orders may be readily filled. In doing this, too much care can not be exercised in keeping the varieties distinct. A nurseryman who has a proper appreciation of his business, will no sooner send out a wrongly named tree than he would steal its value from the pocket of the purchaser. In the nursery every preparation should have been made for the Fall trade—stakes, labels, moss, straw, bagging, twine and all packing materials should be at hand, so that all orders may be filled at the earliest possible moment.

We have so often advised farmers to plant trees that the counsel seems trite. Yet we know that it can not be too frequently repeated, and we know that no better investment can be made than in a judicious purchase of fruit trees. Every farmer should have a good orchard to supply fruit for home use, and for marketing. Any one wishing to purchase a farm will pay much more for one with a well established orchard, than he would for a place without fruit trees. Our advice has always been, to deal directly with the nurserymen and avoid tree peddlers. There are but few persons who are not within reach of a reliable nurseryman, and those who are not acquainted with one, can consult our advertising columns.

Apples.—These should be picked with the precautions mentioned in the article on marketing fruit on page 304. The later sorts may be left on the trees until frosts occur. Pick in dry weather.

Buds inserted last month will need looking after, and the bandages should be loosened if too tight.

Grounds for Fall or Spring planting may be manured and plowed, and if the land is at all inclined to be wet, abundant drains should be laid.

Insects.—Those which make their cocoons upon the branches, may be readily discovered after the leaves have fallen. Remove them wherever found.

Labels.—See that those which are partly effaced are renewed before winter. Do not depend upon labels for an orchard. As soon as the trees are planted, make a map and record the name of each tree in its proper position. See label on page 305.

Manure.—Apply to the orchard. Do not be content with putting a small quantity around the trunks, but coat over the whole surface.

Ornamental and Shade Trees.—The deciduous varieties may be planted as soon as the leaves fall.

Stone Fruits.—Cherries and Plum trees may be set out in the Fall, but the more tender Peach, Apricot, and Nectarine, are better left until Spring.

Seed Beds may be made according to hints on page 305. The same treatment may be pursued with the seeds and nuts of most of our ornamental trees.

Weeds should be kept down in the nursery until frost renders the use of the hoe unnecessary.

Kitchen Garden.

The near approach of frost makes this a busy month in the Kitchen Garden, as there are many crops which must be secured before they are injured by it. This, with preparation for next Spring's work, will keep all hands fully occupied until the ground becomes frozen. A good gardener will have everything cleared up, and the garden as clean and tidy in the Fall as at any other season.

Artichokes.—These, in this latitude, need a winter covering of litter, and to be banked up with earth.

Asparagus.—Cut down the stalks and burn them. Cover the beds with a generous coating of coarse stable manure. New beds may be made now; hints upon this subject are given on another page.

Beans.—Limas are ruined by a slight frost. As soon as there is any danger, pick the crop and shell and dry those not wanted for immediate use. House the poles for another season.

Beets.—These should be harvested before hard freezing. In cutting the tops, do not cut too close. Store in bins and cover them with sand or earth to prevent wilting, or if the quantity is small, they may be put in barrels. They should be allowed to dry a little before housing.

Cabbages.—Harvest upon the appearance of hard frosts. The best plan we have tried for wintering them is, to place two rails side by side, or to plow a deep furrow and set the cabbages heads downwards on the rails or along the furrow. Then by means of a spade or by turning up the earth with a plow, completely cover the cabbages, and pat the earth down hard with a spade so as to shed water. The ridges should be made on a sloping piece of ground from which water will run freely. Plants sown last month for wintering, may be set out in cold frames.

Cauliflowers.—Those which have not headed, should be taken up with a ball of earth and placed in the cellar; they will generally form heads. Set young plants in cold frames.

Carrots.—Harvest as above directed for beets.

Celery.—Harvest before severe frost. Take up the plants, and having removed the waste leaves, stack it upright in a narrow bed, and cover with earth and a protection of boards.

Cold Frames should be in readiness before the weather becomes too cool. Cabbages, Cauliflowers, etc., may be wintered in them, to afford early plants in Spring. Air should be given during mild weather. Bank earth around the frame upon the approach of Winter, and cover the glass with boards or other protection.

Hot-Beds.—Provide a heap of rich earth in a convenient place for use in hot-beds in early Spring.

Lettuce.—Transplant to cold frames. Seed may be sown in frames.

Onions.—Those sown late, for wintering over, need a good covering of litter to protect them.

Parsnips.—The main crop is to be left in the ground. A supply for use while the earth is frozen, may be taken up and buried in sand in the cellar.

Pickles.—Continue to salt cucumbers, unripe tomatoes, green peppers, melons, etc., for pickles.

Rhubarb.—New beds may be made at any time before the ground is frozen. Give plenty of manure and set the plants 3 or 4 feet each way. See directions in April Calendar.

Salsify requires the same treatment as parsnips.

Spinach.—Thin out if needed, and give a light covering of litter to protect it during the Winter.

Squashes.—A very moderate frost injures them; house in good season, and be careful not to bruise them. Any unripe Hubbards may be used at once as they are better when green than most other squashes are when ripe.

Sweet Potatoes.—Dig as soon as the tops are killed. Handle carefully; pack in very dry sand, or in cut straw; keep in a warm place. See April Agr.

Tomatoes.—Bottle or can a good supply. The frost can be kept from the vines by a light awning of cloth and the period of fruiting be thus extended.

Trenching may be done this month, and the ground thus be made partially ready for Spring.

Turnips.—The early varieties may be stored or marketed. Rutabagas and other late sorts will continue to grow for some time yet.

Winter Cherries.—Collect as they ripen and make into preserves, or keep them with the husks on to be used as needed.

Fruit Garden.

Much can be done in preparing land and in setting out hardy trees and shrubs.

Blackberries.—These can be successfully planted in the Fall. The ground needs to be enriched with vegetable matter, such as muck or leaf compost and well rotted manure. The New Rochelle and Dorchester are the best accessible kinds. We have known the finer varieties of the wild bushes to be cultivated with good results. The tall kinds should be set in rows 8 feet apart and 4 feet in the row.

Currants and Gooseberries.—Set out established plants the last of the month, and make cuttings for both as directed in the article on currants, page 306.

Grapes.—These should all be picked before hard frost. Grapes have been kept well until Spring by packing in boxes a foot square and 6 inches deep, with paper between each layer. The boxes should be kept in a cool cellar. Transplanting may be done this month. In the far northern localities the vines may be pruned and laid down this month.

Strawberries.—Beds may still be made, though it should have preferably been done last month. Cover both new and old beds before hard freezing. Forest leaves makes an excellent covering, but straw is generally used, because more available.

Flower Garden and Lawn.

Tender plants which yet remain out should be removed to winter quarters. The borders should still be attractive with late-blooming plants, and they ought to be subject to the same care in keeping as at any other season.

Bedding Plants.—Petunias, lantanas, geraniums, etc., usually get so overgrown and misshapen during the Summer that they are seldom worth taking up in the Fall. It is much more satisfactory to start new plants. If this has not already been done, cuttings should be made at once.

Bulbs.—Plant for Spring as directed last month.

Chrysanthemums.—There should be a fine stock of these, as they add much to the fall decoration

of the garden. They bloom even after hard frosts. Keep them neatly tied up.

Dahlias.—All should be properly labelled while the flowers are perfect and you are able to identify them. Do not be in a hurry to take up the roots, as soon as the tops are killed: they keep better if allowed to ripen a week or two in the ground. Lift the roots on a dry day: let them dry awhile in the sun, and then pack away in a dry, cool cellar.

Frames and Pits should be ready to receive the plants. Tender roses, verbenas, salvias, geraniums, etc., may be wintered in them. Give ventilation whenever there is no danger of frost.

Gladiolus.—Treat as directed above for dahlias.

Perennials.—Phloxes and others may be divided and reset as soon as vegetation ceases. Sow seeds of Hollyhock and Wall-Flower early this month.

Seeds.—Continue to save from the best flowers until the plants are killed.

Shrubs.—Plant freely of the hardy sorts. These mostly do best when planted in the Fall.

Lawn.—New lawns may be made sowing early and rolling well, and again before Winter sets in.

Green and Hot-Houses.

The plants should all be in their places this month, the pots cleaned from weeds and moss, and the plants properly pruned and arranged according to their necessities for light and heat. A little fire heat will be needed by the tropical kinds.

Ventilation should be carefully attended to, and a proper degree of humidity kept up, by syringing.

The war upon insects must be commenced as soon as the plants are housed: they are much easier kept in subjection if taken in time.

If there is room for a few pots of annuals the seed may be sown now. They will add much to the decoration of the house in Midwinter.

Apiary in October.

Prepared by M. Quinby—By Request.

Consumers of honey look for its plentiful arrival in market this month. As they are willing to pay well for the good appearance of the article, pains should be taken to have it neatly put up, and in salable order. With a damp cloth wipe off from the boxes any honey that may have leaked out. Paste fine clean paper or muslin over the bottoms, to exclude insects and dust. Turn the boxes bottom upward to ride to market, as the combs are less liable to be broken. Pack the small boxes in a larger one that can be easily handled, and secure from sliding about and from rough usage, that the combs may be kept whole. The cells in the store combs of the boxes are usually much longer than those for breeding, and at the same time are inclined upward, as philosophy would teach us that they should be, to keep the honey from running out. If boxes with such cells, are turned bottom upward, the cells incline downward, and some honey must run out of all not sealed, and will flow over the caps of those that are covered. If inverted immediately on taking the box from the hive, while the honey is warm, it is worse than after getting cold. If the honey does not burst off caps, it will press fine particles through the pores, presenting a wet, or greasy appearance. When the honey does not come through, simply pressing against the sealing gives it a different appearance from the clear white of the best honey, when first taken from the hive, for except in large cells, bees seal these cells, without the covering touching the honey. If we care for the appearance of the honey, the boxes should not be inverted at any time, (except to prevent breaking combs when on the road.) In taking the box from the hive, it should not be wrenched off by taking hold of the top, but carefully lifted by a strong knife slipped under the bottom. It should then be set on its side or end, keeping the combs vertical until the bees are out; when put away it should stand in the same position as on the hive. The half cells next the glass, when

filled with honey—and in good seasons they will be so—if the box is removed by wrenching, will be quite apt to leak. Although we can with care usually prevent leaking, it will inevitably occur sometimes. The fine appearance of the combs may be restored with proper care. Set the box on the hive, and allow a few bees to enter, they immediately lick up all honey that is running, and that which is in unsealed cells. The danger is, in letting in too many bees, if they do not find honey running sufficient to satisfy them, they do not hesitate to bite away the caps of that sealed. As soon as the bees have cleaned all the combs, the box is to be put where the bees will leave it, as at first. Now is the time to select stocks for wintering. Those who keep none but the best, will have what is called "good luck." Too much honey in a hive is as objectionable as too little. Too many bees are not wanted. From 25 to 40 pounds of bees and honey is an abundance. A cluster of bees that extends through seven or eight combs, on a cool morning, the latter part of this month, may be considered a reliable one, unless diseased brood, or excess of honey causes them to spread out more than usual. Any stocks containing foul brood should be broken up at once. If the brood be not all hatched by the middle or last of October, something unfavorable may be suspected. Some failures must be looked for in attempting to winter hives not possessing all the requisites above named. Those having sufficient bees and comb, may be fed up to the proper weight. The feed should be given to them as fast as the bees can take care of it. It is not safe to depend on the weight of the supplies given to the bees; ascertain the real condition by weighing the hives after feeding what is deemed a proper amount. If combs are deficient, bees and honey will be also. In such cases it is best to take out the bees and set the hives away in some cold room where they will be thoroughly frozen, and keep them for use another year. They should be placed right side up, and have every crevice stopped to keep out all intruders. Condemned colonies should be driven out before killing the bees; it is less trouble than removing them from the combs when taking the honey from the hive. Strain the honey from combs unsuitable for the table; it drains out more easily if the combs be crushed before they are cold.

N. Y. Fruit Grower's Meetings.

During the hot weather, these gatherings were partially suspended, but now that the season of fruits has come, the growers seem to have renewed their interest in the meetings, and on Thursday, Sept. 10th, a large number of them assembled and had an interesting talk, a few points of which we give below. There was a fine show of fruits, better than can be seen at some State Fairs, and more instructive too, for the fruit was tested as well as seen:

Mr. E. E. Clark, of New-Haven, called to the chair.

C. W. Idell, of West Washington Market, presented a basket of fine Crawford peaches for distribution to the members; some seedling peaches of promise were shown, one of which, the "Creole" was remarkable for its thin skin and delicious flavor.

Mr. Cole, of Conn., showed some plums, seedlings of wild Iowa plums, which, though possessing a tough skin, with rather coarse flesh, were considered worthy of attention on account of their freedom from the knot, and from the ravages of the curculio.

Dr. Ward, of Newark, N. J., stated that he went largely into the plum culture 15 years ago, planting hundreds of trees, but so completely were the crops destroyed by the curculio, that he rooted out all his trees. He thinks that by starting again with this wild plum, the skin of which is too thick for the curculio, we may improve upon it and yet raise passable plums.

Dr. Trimble said it was cowardly and disgraceful to submit to an insect enemy so easily conquered. He had seen a good collection of plums from Ellwanger & Barry, who jar the trees and thus raise a fair crop.

Dr. Newberry made a chicken yard of his plum orchard and now has fruit where it was formerly destroyed. The plan should be pursued by neighborhoods, or the insects from neglected orchards will sting others' fruit.

Dr. Trimble has heard much about the instinct of the curculio, that the female will not deposit her eggs over water, but a visit to Dr. Underhill's place where the plum

trees hang over a pond, proved that such was not the case, as the plums overhanging the water were equally affected with the others. True, the larvae of those which fell into the water would be drowned, but the others had learned no lesson by their fate. The jarring process if followed up, will save enough plums. Hard winters and dry seasons destroy immense numbers of the curculio.

A. S. Fuller thought we might as well try to destroy mosquitoes as curculios—a few trees could be attended to, but the task would be too great with whole orchards.

A plate of Tyson pears from J. McAfee, of New-Bedford, Mass., was presented, and the fruit pronounced very fine, though rather over ripe; this is one of our best pears.

Dr. Trimble showed fine specimens of Bartlett pears for which dealers would pay \$18@20 per bbl. He thought the trees were almost destitute of fruit early in the season, but as nearly every specimen grew large and fair, they turned out well, the high price making them a profitable crop. Bartlett sells better than any other pear; we can not change public opinion.

John Hicks of Long Island, at a previous meeting, had advocated Willie's Sweet as the best apple for baking. W. E. Carpenter set forth in equally strong terms the superiority of the Westchester Pound Sweet as a baking apple, and it was agreed that each should present at this meeting a specimen of the baked fruit. Mr. Carpenter was unable to be present, but Mr. Hicks came, bringing a dish of nicely baked Willie's Sweet apples, the quality of which was tested by the meeting, and it was agreed that the fruit for baking purposes could not be too highly recommended.

A. S. Fuller showed specimens of grapes, among which were Blood's White, very foxy and worthless; Blood's Black, which was little better; a good wild grape, Canby's August, which was a step in advance of either; and one of the earliest blue grapes, of passable quality, and which has been too much neglected; next follows the Hartford Prolific several steps in advance of the last, in point of flavor, but still a little foxy, yet sweet and good, an early and abundant bearer, and the fruit sells well. Oporto and Taylor's Bullitt had very few perfect berries on the clusters. There appears to be some radical defect in the flowers; they do not fertilize well; are always deformed, making them worthless here. Delawares were exhibited last, with these there is little except size to be desired.

G. R. Garretson of Flushing, exhibited well ripened Hartford Prolific grapes, and some Northern Muscadine, the latter a pretty good fox grape.

T. W. Field wished to bear testimony to the excellence of the Hartford Prolific, which, besides its other good qualities, bloomed so early that it escaped the ravages of the rose bug, and ripened long before any danger of frost in the Fall: it does not drop unless the vines overbear.

Fejee Tomatoes were shown by W. W. Davis. This, Prof. Thurber pronounced the tomato for cultivators. Several large market men in the vicinity of New-York, are discarding the old sorts and substituting the Fejee.

Agricultural Exhibitions in October.

STATE FAIRS.

Illinois.....	Decatur.....	Sept. 28—Oct. 2
Indiana.....	Indianapolis.....	Sept. 28—Oct. 3
Pennsylvania.....	Norristown.....	29—30
Amer. Grape Show.....	New-York.....	Oct. 1—3
Deseret.....	St. Lake City.....	Oct. 2—3
Kansas.....	Leavenworth.....	Oct. 6—9

COUNTY FAIRS.

MAINE.

Franklin.....	Farmington.....	Sept. 30—Oct. 1
Cumberland and Portland.....	Portland.....	Oct. 14—15
Kennebec.....	Readfield.....	Oct. 14—15

MASSACHUSETTS.

Worcester—North.....	Fitchburg.....	Sept. 29 Oct. 1
Hampshire, Franklin, & Hampden.....	Northampton.....	Oct. 1—2
Worcester—South.....	Sturbridge.....	1—2
Housatonic.....	Great Barrington.....	1—2
Plymouth.....	Bridgewater.....	1—2
Hampshire.....	Northampton.....	1—2
Berkshire.....	Pittsfield.....	6—7
Bristol.....	Taunton.....	6—7
Barnstable.....	Barnstable.....	6—7
Hampden.....	Springfield.....	6—8
Hampshire.....	Amherst.....	8—9
Hampden—East.....	Palmer.....	13—14
Martha's Vineyard.....	Oct. 20—21

NEW-YORK.

Jefferson.....	Watertown.....	Sept. 29—30
Cayuga.....	Auburn.....	29—30
Yates.....	Penn Yan.....	29—30
Genesee.....	Batavia.....	Sept. 30—Oct. 1
Otsego.....	Cooperstown.....	30—31
Columbia.....	Hudson.....	29—30
Delaware.....	Delhi.....	29—30
Albany.....	Albany.....	29—30
Queens.....	Hempstead.....	Oct. 1—2
Montgomery.....	Fonda.....	Oct. 7—8

PENNSYLVANIA.

Susquehanna.....	Montrose.....	Sept. 30—Oct. 1
Union.....	Lewisburgh.....	Oct. 7—9
Wyoming.....	Wyoming.....	Oct. 20—22
Clearfield.....	Clearfield.....	Oct. 20—23

ILLINOIS.

Kendall.....	Bristol.....	Oct. 6—8
Putnam.....	Hennepin.....	Oct. 6—8
Edgar.....	Paris.....	Oct. 6—8
Madison.....	Edwardsville.....	Oct. 6—9
Bureau.....	Princeton.....	Oct. 6—10
Lake.....	Libertyville.....	Oct. 7—8
Schuyler.....	Rushville.....	Oct. 7—8
DeKalb.....	Syracuse.....	Oct. 7—9
Randolph.....	Marshalltown.....	Oct. 7—9
McHenry.....	Woodstock.....	Oct. 7—9
Tazewell.....	Tremont.....	Oct. 7—9
Vermillion.....	Danville.....	Oct. 7—10
Stephenson.....	Freeport.....	Oct. 13—16
Lee.....	Dixon.....	Oct. 14—16
Perry.....	Pinkeyville.....	Oct. 14—16
Jefferson.....	Mt. Vernon.....	Oct. 14—16
Hamilton.....	McLeansboro.....	Oct. 14—16

OHIO.

Trumbull.....	Oak Grove.....	Sept. 29—Oct. 1
Lake.....	Painesville.....	30—31
Delaware.....	Delaware.....	30—31
Harrison.....	Cadiz.....	30—31
Miami.....	Troy.....	30—31
Pickaway.....	Circleville.....	30—31
Summit.....	Akron.....	30—31
Seneca.....	Tiffin.....	30—31
Van Wirt.....	Van Wirt.....	Oct. 1—2
Jackson.....	Jackson.....	1—2
Paulding.....	Antwerp.....	1—2
Mahoning.....	Youngstown.....	6—8
Butler.....	Hamilton.....	6—9
Loraine.....	Elyria.....	6—9
Cuyahoga.....	Cleveland.....	6—9
Stark.....	Canton.....	7—9
Montgomery.....	Dayton.....	7—9

MICHIGAN.

Kent.....	Grand Rapids.....	Oct. 1—3
Hillsdale and Lenawee.....	Hudson.....	6—8
Oakland.....	Pontiac.....	7—9

WISCONSIN.

Fond du Lac.....	Fond du Lac.....	Oct. 1—3
Polk.....	Osceola.....	7—8
Monroe.....	Sparta.....	8—9

CANADA WEST.

West Middlesex.....	Strathroy.....	Oct. 1—2
Toronto.....	Toronto.....	6—8
Huron, (Clint. Branch), Clinton.....	7—8
So. Greenville.....	Prescott.....	7—9
Durham—West.....	Newcastle.....	8—9
Wentworth & Hamilton, Hamilton.....	14—15

SUNDRY COUNTIES.

New-London.....	Norwich, (Ct.).....	Sept. 29—Oct. 2
Hillsborough.....	Milford, (N.H.).....	Oct. 1—2
Union.....	Woodbury, (Ct.).....	Oct. 7—8
Newcastle.....	Wilmington, (Del.).....	Oct. 6—8
Burlington.....	Mt. Holly, (N. J.).....	Oct. 6—7
Atlantic.....	Egg Harbor City, N.J.....	Oct. 8—9
Percy.....	New Harmony, (Ind.).....	Oct. 6—9
La Grange.....	La Grange, (Ind.).....	Oct. 13—16
Fayette.....	West Union, (Iowa).....	Oct. 6—7
Chickasaw.....	New Hampton, (Iowa).....	Oct. 8—9
Cole.....	Jefferson City, (Mo.).....	Oct. 5—9
York.....	Frederickton, (N.B.).....	Oct. 7—8



Containing a great variety of items, including many good hints and suggestions which we give here in small type and condensed form, for want of space elsewhere.

Seventeen Thousand Neighbors

are now visited by the *Agriculturist*. In each of these, one or more persons may secure valuable articles from our premium list, without cost. There is scarcely a town in the country where there are not twenty to a hundred or more families, that would find the *Agriculturist* a valuable visitor. All that is required is, for some enterprising person to present the merits of the paper and gather up and forward the names. The reader will be interested in turning to page 313 and looking through the premium list and the descriptive notes. Nearly 3000 persons secured one or more of these articles last year, and with almost universal satisfaction, as our correspondence abundantly shows. This year, ten to twenty thousand persons may each get premiums.

A Soldier's Widow Greatly Benefited

at Small Cost.—Seven ladies, in planning how they might do something to assist a soldier's wife, resolved themselves into a committee and canvassed the town for subscribers to the *Agriculturist*. In two days they raised a club for a premium Sewing Machine which they presented to her, and she is now able to support herself and family. Many people subscribed to promote such an object, though they had not previously become awake to the value of the paper to themselves.

How the Agriculturist was obtained

at 58 cents a year!—One hundred men subscribed a dollar each, and the club received a Premium Wheeler & Wilson's Sewing Machine. It was then put up at auction, to be bid for only by members of the club, and

was sold for \$43.50. Of this, \$1.50 was paid for freight expenses, and the remaining \$42 divided among the club, which reduced the cost of the paper to them for a year to only 58 cents each. Similar enterprises have been undertaken elsewhere with like results. An Agricultural Society in Iowa subscribed for the copies as a Society, and gave them away as premiums, and then sold the machine for the benefit of the general fund.—A good operation in both cases, and suggestive to others.

Subscription Receipts not Given.—

It is utterly impracticable to return receipts for all subscriptions. Every paper is stopped when the time is up, so that its continued reception is an acknowledgment of payment. If any one in forwarding a subscription, specially desires a receipt, he will please enclose a post-paid envelope directed to himself, and the receipt will be forwarded at the time of opening his letter. We try to keep our paper at a low price, by economy in time and every other item. A few cents' worth of time and postage would more than consume all of the small profit there is on any single subscription for a whole year.

To Correspondents.—

The "writing mood" often seems to depend upon the weather, or the state of the country, or something else, judging from the fact that at times we receive box full after box full of letters, on all sorts of topics, and then there is a dearth of them. In the former case we must necessarily delay early responses to some of them. Often we cannot answer the queries made, but do not take the time to write to that effect, unless there is some important reason for so doing. We are glad to receive any number of practical hints, suggestions, items of experience or observation, queries, etc., but hope none will esteem us neglectful if they do not have instant attention.

Important.—Always write every name plainly; give the *Post Office, County and State* of every name; and tell briefly, but plainly and fully, just what is desired.

Volumes of the *Agriculturist*, as far back as the 16th (1857), can always be supplied. Unbound at \$1 each; or if neatly bound, at \$1.50. If to go by mail, \$1.24 in numbers, or \$2 when bound.

The N. Y. State Fair is in progress, as we go to press. The telegraph reports it to be a decided success, peculiarly at least. One of our Editors is present, to gather any noteworthy items for the next paper.

Come and See the Grapes.—

This paper will reach most of our readers before the first day of the month, when the great display of Grapes is to open at the office of the *American Agriculturist*. It will doubtless be the best show of this fine fruit ever seen in this country. Our Office is so arranged that we can remove desks, screens, etc., if necessary, and thus give up the whole floor, 80 feet long and 25 feet wide, to the exhibition tables and visitors. The best part of the day for seeing, will be early in the forenoon, any time after 8 o'clock, A. M., as there will naturally be a much greater crowd in the afternoon. About 25,000 persons were present during the three days of the Strawberry Exhibition, without great inconvenience. The grape show will be open to the public, free of charge, from 2 P. M. on Thursday to 4 P. M. on Saturday—Oct. 1st, 2d and 3d.

The Cucurbitaceous Show.—

All who have specimens of Pumpkins, Squashes, Gourds, remarkable for size, appearance or novelty, will be interested in the show of the cucurbitaceous family, (which includes Gourds, Pumpkins, Squashes, etc.) to open Nov. 4th, as announced in another column. We desire early notice of what is to be exhibited, in order that good provision may be made for their proper display. The exhibition last year happened at a very rainy season, but should this occur again, the specimens will bear keeping until fair weather, so that all who desire to do so can call and see them. Let us have, as far as possible, the correct name and origin of specimens, and any unusual item in the cultivation, for the interest and instruction of visitors.

The Strawberry Plants, offered as

Special Premiums last Summer, are all sent out. The excessive drouth that checked the growth of good roots, delayed the forwarding of them until Sept. 14, to 21.

Frost and the Cotton Experiment.—

From a friend who has recently passed through Illinois, and from a large number of correspondents, we learn that the ravages of the frost have caused many sections to present a most melancholy spectacle. The cotton is pretty generally killed outright. A great many acres were planted last Spring at a heavy expense for the seed. The hopes of those who have thought to make Illinois a cotton growing State, we are sorry to say, are disappointed, and some are large sufferers by the experiment.

Nankin or China Sheep.—J. S. M., and others. We have never discovered anything in this breed of sheep to recommend them over others, except their prolificness, and this is probably offset by lack of vigor of constitution. They have been in the country some six or eight years, and have not been as much disseminated as one would expect, if as really valuable as claimed.

Caked Bag.—Mrs. E. C. Wheeler, of Essex Co., N. J., says, take $\frac{1}{2}$ lb. of the green bark of the Bitter-Sweet (*Solanum dulcamara*), steep it in sufficient water to make a strong tea, drain off the liquid, add 1 lb. of lard to it, and let them simmer together to the consistence of lard; when cold, rub the affected parts thoroughly with the mixture, night and morning. A perfect cure will be effected in two or three days. The application has proved, upon repeated trials, equally as good for human beings as for animals.

Greasing Chickens.—Jos. Michener remarks on J. Bright's chicken-greasing: "Of course 'it does not do to grease sitting hens with him or any one else, simply for this reason: It fills the pores of the shell, and the chicken smother; but as soon as all the eggs are hatched that are likely to, take the hen off and grease her as much as 'he or any one else' wants to, and I will insure him that the lice will die, and the chickens will live."

Husking Aids.—J. Scofield, Windham Co., Conn. Among the many contrivances to lessen the laborious operation of husking corn, we know of nothing better than the "husking pin," described in the *Agriculturist*, Vol. XX, p. 9, (Jan. No.), which may be of hickory, bone, or iron. It is held in the palm of the hand by a leather strap passing over the two middle fingers, and the pointed end is used instead of the thumb and finger nail, to open or part the husks.

Packing Pork.—A subscriber wishes to know the best method of salting pork; whether saltpetre is necessary for its preservation, and whether it is advisable to repack it in the Spring; also whether there is any reliable method of cleansing tainted barrels. Will some one having successful experience please contribute his method, and also answer the other queries named above.

Killing Quack or Quitch Grass.—S. K. Walkup, of Framingham, writes that he succeeds in destroying this pest by smothering it with old straw, hay, or other mulch. He covers it in the month of June, and succeeds in killing out the plant in about a month.

Rats Again.—Isaac Hicks, of Queens Co., L. I., says that being much troubled by rats, he dropped some chloride of lime into their holes, and the rats have not been seen or heard of since.

Deep Plowing for Potatoes.—A Long Island subscriber, M. Foley of Suffolk Co., placed some very fine Peach Blow potatoes upon our exhibition tables, with the remark that deep tillage and thorough working of the soil gave such potatoes, while those of his neighbors, on lightly stirred ground, with little tending, were literally "burned up" by the drouth. If deep tillage is good for the light soil of Long Island, still more will it benefit the heavier soils of the main land.

Large Egg Plants.—The purple egg plant, under skillful culture, frequently grows to a very large size. Several specimens on *American Agriculturist* Exhibition Tables weigh five and six pounds each. Among those shown by Wm. Simpson, of Westchester Co., N. Y., one weighs seven and one half pounds, but that yields the palm to a mammoth specimen grown by R. M. McGarretty of the same County, which measures 29 $\frac{1}{2}$ inches in circumference and weighs eight pounds and ten ounces!—The largest we have ever seen.

Ripening Tomatoes.—J. Hussey, York Co., Me. As there are frequently a few nights of frost in your vicinity, followed by warm weather, you can easily protect the unripe tomatoes with mats, quilts, horse blankets, etc., in threatening weather. A little care for two or three nights may keep them ripening for weeks. Or the plants may be taken up with earth around the roots, and set in a shed or cellar to ripen the fruit.

Crab Apples.—J. W. Decker, Wayne Co., Pa. The red crab apples sent are very handsome, of large size and of good flavor. Considerable attention has lately been paid to the Siberian crab, and several seedlings of promise have been sent out. One variety called the "Hyslop crab," brought in by H. A. Conger, Walworth Co., Wis., measures 5 $\frac{1}{2}$ inches in circumference, is of a bright red color, covered with a rich bloom, and is

of fair flavor. The Crab Apple merits attention as a thrifty growing tree, ornamental in foliage, and flowers. The fruit, besides being beautiful, is valuable for preserving.

Profitable Pears.—To-day (Sept. 11th), we have seen good Bartlett pears selling in Washington Market, New-York City, for \$15 to \$18 per barrel, wholesale, and the dealer informed us that choice selected Bartletts would bring from \$18 to \$25 per barrel. Half a dozen large well grown trees would yield more profit than a whole acre of grain or other field crops, and perhaps more than an acre of apple trees of the same age.

Unripe Grapes.—Grapes are usually picked before they are fully ripe. We have heard persons call the Isabella a poor, sour grape, simply because they commenced picking as soon as the fruit began to color, and the grapes were all gone at least a week before they would have been fully ripe. The Isabellas, particularly, should remain on the vines at least one week after they appear fully ripe. When designed for keeping, leave them uncut until in danger of freezing—a light frost will not injure them.

Fall Pruning of Grape Vines.—"G. T." Yes; we like Fall pruning, and the sooner it is done after the first hard frost the better. If left until just before Winter sets in, and the weather should be cold all the time, the shoots will frequently bleed in Spring.

The Cut Leaved Blackberry Again.—S. H. Halsey, Esq., of Astoria, L. I., has brought us specimens to show that this variety is, with him at least, a good bearer. The branches hang as full as need be, and the fruit is of good size. It is sweet, but has a flavor which will probably not please some persons. The vines are disposed to run to the length of 20 or 30 feet. Mr. H. keeps his cut back to about 6 feet, and has an abundance of fruit. See *August Agriculturist*, page 231.

Planting Raspberries.—"J. H. C." As most of the cultivated sorts are only half hardy, it is better to plant out in Spring after they have been safely wintered. When set in the Fall, there is required the additional labor of covering them.

Strawberries from Seed.—Chas. A. Warren, New-Haven Co., Conn. Your seedlings probably will not bloom until the third year. The runners should be kept off, and the plants be well cultivated in order to get as strong and vigorous stools as possible.

Triomphe de Gand Strawberries Productive.—J. R. Flink, Luzerne Co., Pa., was inclined to rate this strawberry a poor bearer, after one year's trial. The plants were strong and healthy, and being set in August, he looked for a full crop the following Summer, and was disappointed; but tending them well, and keeping them in stools, the result the next season was perfectly satisfactory. No strawberry will yield a full crop the first year after setting them out in Autumn.

Small Fruits.—Mr. Knox of Pittsburg has the largest and most complete "Small Fruit" plantation in this country, if not in the world. Others may have more of one kind, but he has all the small fruits—strawberries, raspberries, grapes, etc., and a large amount of each. In passing through Pittsburg, in July, we made a hurried visit to Mr. Knox's place, a little distance southwest of the city, not to gather any special notes at the time, for we were too much worn down with the labors at Gettysburg—but to take a general look at the whole. We were highly pleased with what we saw, and shall take pleasure in making a future visit of greater length to study the small fruits where they are so well grown, and on so large a scale.

California Wines.—California is not only a wonderful country in its mineral products, but its agricultural and horticultural resources are constantly exciting our admiration. The European vine was introduced there by the early Jesuit missionaries, but its culture did not extend much beyond the grounds of the Missions until within a few years. Now that enterprising Americans and Europeans have undertaken the culture, California bids fair to become one of the great wine-producing countries of the world. The products of her vineyards already find a place in this market.

Lilium Brownii.—This is one of the most beautiful of the Japan Lilies; we have a fine specimen of it from the grounds of A. S. Fuller, Esq., of Brooklyn. This sort is quite dear as yet, but we hope that this and the other varieties will soon be at a price which will bring them within reach of everybody.

A Pretty Variegated Plant.—John Paddock, Houston Co., Minn., sends us *Euphorbia marginata* raised from seeds from Pike's Peak. We have seen acres of it in Texas, but never saw it in cultivation. We should be glad of some seeds.

Seeds Received.—J. G. English, sends us some seeds of a White Perennial Phlox, found in the Grand Prairie, Ill. We shall make a trial of them.

Dyeing with Sumach Berries.—Mary Brown, of Rush Co., Ind., wishes to know how to color yarn with sumach berries. Who can tell her?

Take Care of the Sorghum.—Now that the crop is grown and already being worked up in some places, see to it that none goes to waste. If the crop cannot be ground and evaporated as fast as cut, stook it, either in the open field or in covered sheds—it will then keep good for weeks. It should be worked up, however, as fast as possible, grinding in a strong mill to press out all the juice. Evaporate in shallow pans as fast as ground, and no chemicals will be needed. The quicker the juice is boiled and skimmed, the clearer and lighter colored will be the syrup.

Sugar Evaporators.—As an indication of the extent to which sorghum growing is being carried on at the West, we may mention that one firm, Messrs. Blymyer, Bates & Day, of Ohio, who manufacture the Cook's Evaporator, are turning out 60 per week, and expect to dispose of 1,500 to 2,000 for the incoming crop.

Cheap Paint.—L. T. Nells, of Hamilton Co., Ohio, sends us the following recipe for a paint which he says is of German origin. He says it wears and washes well, is water-proof, and may be used for house-floors and out-door work. The proportions for 400 square feet are: 2 $\frac{1}{2}$ oz. Beeswax, 1 oz. Potash, $\frac{1}{4}$ oz. Ochre, 1 oz. unburned Terra de Sienna, and 6 pints of water: boil for two hours and apply it hot.

Cleansing Cemented Fruit Bottles.—Lucia N. Hall, of Ashtabula Co., Ohio, writes that upon noticing the directions given on page 231, *August Agriculturist*, she tried boiling the bottles in strong soap suds, and found it effectual. To prevent breakage, the bottles should be put in before the water is hot, and taken out after it has cooled somewhat.

To Cleanse a White Crape Shawl.—A lady asks how this can be best done without danger of injuring the shawl. We do not know. Who does?

Book for Self-Instruction in Latin.—Genie Belmonte, Either Harkness' or Arnold's First Lessons will answer your purpose.

Farm Book.—"J. H. A." Westchester Co., N. Y. You will find several good books on farm topics in our list published on one of the last pages of the paper, but there is no one book which so generally meets the varied wants of the farmer, (who should also know something of flower and vegetable gardening, and also fruit-growing), as a living periodical like the *Agriculturist*, which notes, as they transpire, all the improvements, both in modes of culture and in the things cultivated.

The Natural Laws of Husbandry, by LIEBIG. D. Appleton & Co. Perhaps no writer has done so much to excite an interest in the science of agriculture as Liebig, and whatever comes from his pen will attract attention even from those who reject his theories. The present work contains the matured opinions of this distinguished author. Those who open it expecting to find a practical agricultural hand-book, will be disappointed. It requires a certain amount of scientific knowledge to read the work understandingly, and those who have this requisite, will find in it much food for thought. The translator has probably made it less popular than the original; thus we find Amylum used instead of starch, and sundry other unnecessary displays of learning. The American reader should bear in mind that where corn is spoken of, wheat is meant.

Heat Considered as a Mode of Motion, by John Tyndall, F. R. S., etc. N. Y., D. Appleton & Co. This is one of the works of which there are unfortunately too few—one in which the profoundest views of a most difficult subject are presented to the comprehension of any intelligent person, in a perfectly plain manner, without departing from scientific accuracy. It is a charming book on a subject of universal interest, and the Appletons have done a good service in re-publishing it in such an elegant form. We mail it for \$2,

Feed for Horses.—Robert H. Martin, Sussex Co., Del. Oats are universally considered the best grain for feeding to horses. If the straw be well cured, and the unthreshed bundles be run through a straw-cutter, the feed cannot well be surpassed. The straw so used should be free from rust, and it is considered an improvement to slightly wet the whole just before feeding.

Currycomb Substitute.—W. B. Waldo, Dutchess Co., N. Y., writes to the *Agriculturist* that a case-knife, with the edge made smooth but not sharp, is equally effective with a currycomb in removing dust and scurf skin from the horse, and pleasanter for the animal.

Garget in Cows.—S. S. Moody, Hampshire Co., Mass. This disease is the result of inflammation of the lymphatic glands of the udder of the cow. It may be produced by neglecting to draw off the milk, by external injury, fevers, etc. If neglected, matter may be formed, and a bad abscess result. In its first stages it may usually be relieved by washing the bag with warm water, and then after wiping it dry, applying to the entire surface melted lard, as hot as the animal can bear it. If abscesses be formed, they should be lanced.

Grass for Sheep.—James McCollum, Niagara Co., N. Y. The grass best suited for sheep pasture must depend on the character of the soil. Where blue grass will flourish, nothing is more suitable; in other sections we should prefer timothy, or if exposed to much drouth, should try orchard grass, which bears very close feeding, and is much relished by sheep or cattle.

Freeing Poultry from Vermin.—Edward A. Lewis, St. Charles Co., Mo., writes: "Last year my hens were so infested with vermin that they died on their nests, and even on the roosts. It was impossible for a person to step into the old hen-house, even for a moment, without bringing away colonies of the detestable insects in his clothing. Upon transferring the hens to the new building, they were all rubbed with a mixture of lard and Scotch snuff. The old house was fumigated with tobacco stems and thoroughly white-washed. Sassafras roosting-poles were adopted in the new house, from a suggestion found in the *Agriculturist*. To all which, together with the burning out of the nests, may be attributed the fact that there has not been the least appearance of the pests on my premises the present year.

Subsoiling.—W. C. Pierce, Clinton Co., N. Y. Subsoiling would undoubtedly benefit a clayey loam resting on a gravelly hardpan, but permanent draining with tiles would be a more lasting improvement. We can not name the best subsoil plow; several good patterns may usually be found at any agricultural warehouse. It is not necessary nor advisable to bring up the subsoil to the surface where the soil is eighteen inches to two feet deep. Driving the plow through it will open it to the action of air and moisture.

Prevention of Smut.—James R. Boyd, Ontario, Wis., writes to the *American Agriculturist*, that last Spring he sowed Scotch Fife wheat, after having washed the seed with strong salt brine and rolled it in lime until it was well covered. The crop was entirely free from smut, while neighboring fields without this application, were badly infected. We have used with success a wash of dissolved sulphate of copper (blue vitriol); perhaps common salt would be equally useful.

Orchard Grass with Clover.—William Shockley, Jr. Orchard grass sown with clover makes an excellent mixture, as the two ripen together, and the hay produced is of the first quality. It may be sown with winter grain, the same as timothy. A bushel per acre is sufficient seed when to be mixed with clover. We do not know that it would be less injurious than timothy to the wheat crop, but the experiment is worthy a trial.

Time for Plastering Clover.—James McCollum, Niagara Co., N. Y. We prefer to sow plaster upon the young growth of clover in the Spring. It then has an opportunity of expending all its virtue in forwarding the plants, before being partially washed away, as it would be if applied in Autumn.

Breaking Up Prairie Lands.—"Minnesota" desires some one practically familiar with the operation, to give in the *Agriculturist* details of his experience in breaking up prairie land, as to the best season, what is preferable for the first crop, method of cultivation and the result. He asks "Does the sod rot better when laid flat and even, than when rough and exposed to the weather?" Many now seeking homes in Southern Minnesota, Northern Iowa, Wisconsin, and other prairie

regions, would be greatly benefitted by such information from those who have "been through the mill."

Practical Questions are often as valuable, because suggestive, as direct information. E. J. Judd, Ontario Co., N. Y., sends the following for answer in the *American Agriculturist*: "What does it cost per bushel to grow corn along the line of the N. Y. Central Railroad, and what is the average product per acre? What weight of ears of the 8 and 12-rowed varieties will yield 60 lbs. of shelled corn? In the same section, what is the cost per rod, to thoroughly underdrain land, two feet deep, with good tiles of 1½ inch bore? Also, what is the experience, in these matters, of those living along the line of the N. Y. and Erie Railroad?" As these roads run through districts varying in character along their routes, some of the answers would present widely different figures; still they would contain useful information.

To Keep Bees from Over-swarming.—Several inquirers. Mr. Quinby writes on this subject for the *Agriculturist*: "With the ordinary box-hive, there seems to be no practical way to prevent over-swarming. When there are but few stocks kept, it is possible to remove the queens of the after-swarms, and return the bees to the parent hive. But in large apiaries, it is common to have several swarms issue at once, and cluster together, making it impossible to return each swarm to the hive to which it belongs. In the movable comb hive, the following management will control them: A week after the first swarm has issued, take out the combs and cut off all the queen cells but one, and the work is done. It will not answer to wait until some of the queens mature, and then do it, as by that time the bees get up the swarming fever, and they will sometimes come out with the last queen they have. Over-swarming is disastrous, even when an increase of stocks is desirable, as the old one is often ruined, and perhaps only one of the new ones suitable for Winter. By a little management, two, and even three powerful colonies may be obtained from one in a single season, and not impoverish the old one at all. The queens may be reared artificially. The Italians work much better in this way than the natives, and introducing a mature one to the old stock almost immediately after the first swarm, will result in one or two additional swarms without leaving the old stock almost destitute of bees, during the season of the best yield of honey."

"Northern Honey."—Several inquirers. This is an old invention, secret recipes of which were peddled about the country several years since, at from ten dollars to twenty-five cents, according to the veridancy of the customers. The directions for making it, published in a former volume of the *Agriculturist*, are as follows: Dissolve 20 lbs. of coarse sugar in 3 quarts of warm water. Stir into it one-fifth ounce of cream of tartar, first dissolved in a little water, and also five or six pounds of good honey, and half a teaspoonful of essence of peppermint. Boil the whole slowly for 12 minutes, stirring it all the time, and it will make 30 lbs. of a mixture which with some may pass for honey.

Preserving Cheese from Flies.—S. E. Ogden, Austin, Mich. New cheese should be anointed with butter or oil made from whey-cream, which rises from whey set apart for the purpose after being drawn from the curd. It is skimmed off and churned like other butter. In hot weather a sprinkling of cayenne pepper mixed with it will repel flies. A little beeswax added, hardens the mixture, and is better for the hot season.

The "Wine-Plant" Humbug.—From the frequent advertisements and notices now appearing in the newspapers, we feel constrained to again caution our readers against investing money or time in any so-called "wine-plant." Last year it was the "English wine-plant;" now there are several names. The gist of the matter is, that from the juice of any variety of rhubarb, it is possible to make an alcoholic drink, by adding sugar, and fermenting it. The same is the case with the juices of a great number of other plants and fruits. But there is no essential difference between cider whiskey or cider brandy, and the so-called "rhubarb-wine," except in the amount of alcohol, and that the latter has a different flavor. There is little if any difference in the different kinds of rhubarb, so far as their capability of producing alcohol with sugar is concerned. One of the best varieties of rhubarb for cooking or any other purpose, is the Linneus, or "Myatt's Linneus," as the same plant is sometimes called, from Mr. Myatt who first raised it from seed. This variety is now abundant, and has been advertised in the *American Agriculturist* the present year for \$18 per thousand roots! If anybody invests in it at \$25 per hundred (that is \$250 per 1,000!) because some speculator names it a "wine-plant," he pays

pretty dearly for neglecting to invest a dollar a year in the *Agriculturist*, in which paper the imposition was shown up some time since. We see it stated that nearly 4,000 gallons of this (rhubarb) wine is produced from one acre, and that it readily commands \$2 per gallon! *Credat Judæus!* Pray tell us what responsible party is ready to contract for the product of ten acres (35,000 to 40,000 gallons,) at a dollar a gallon.

Souring of Wine.—Benjamin F. Huntington. Wine and other fermented drinks will sour from exposure to the air. Fermentation is produced by the oxygen of the atmosphere uniting with the sugar of the juice, at first changing it to alcohol, and ultimately to vinegar if the process be continued long enough. Cork bottles or casks tightly when the first or vinous stage of fermentation is completed, and it cannot sour. The vessels should be full, otherwise enough air may be present to induce a change.

Cover the Spinach.—O. L. Allen, Berks Co., Pa. Spinach sown early in September should be covered with hay, straw, or other litter, just before the ground freezes up. A covering of an inch thick is sufficient, and the straw should be removed when danger of hard freezing is over in the Spring. Thin the plants before the covering is put on.

Black Knot on Plum and Cherry Trees.—"F. T." Delhi, N. Y. This is not caused by an insect. It is very well explained and figured in the *Agriculturist* for April.

English Ivy.—H. P. Rogers, Fulton Co., Ill. We cannot tell whether the Ivy will flourish with you. We should try it on the northern rather than on the southern side of the wall, as it will be less exposed to alternations of heat and cold.

Magnolias in Michigan.—O. M. Wood, of the Botanic Gardens and Nurseries, Clinton Co., Mich., states that *Magnolia acuminata* grows well with him, and is as hardy as an oak, while the Catalpa is invariably killed to the ground every Winter.

American or New-Jersey Tea.—Some one in Columbia, Pa., sends us a specimen of the leaves of this plant, which was described in the September *Agriculturist*. He thinks it will never suit the palate of an old tea-drinker. There was money in the letter, but no signature. The number of the letter is 95093. The paper can not be sent unless we have the address.

Egg Plants Delicious if Cooked Rightly.—Many readers say they do not understand how others can like the egg plant. We can; cooking is everything. The best directions are given to the *American Agriculturist* by one of its housekeeping readers. Cut the plant across into thin slices, say ¼ inch thick; salt and lay these together over night; in the morning take them from the brine and sprinkle finely powdered cracker over both sides of the slices; then fry brown (not black) in just enough fat to keep them from sticking to the griddle. Some use Indian meal instead of cracker, but the cracker is best. We eat them thus cooked, and esteem them a really cheap delicacy, though we once thought them poor stuff. A subscriber at our elbow says: "Cut them into slices nearly ½ inch thick; sprinkle on salt, lay them together with a light weight on the top; in the morning drain from the brine, roll in flour and fry in butter, and they can't be beat."

Not Quite Right Yet, Mr. Humbug! One of the swindlers in Philadelphia sends out his "gift" and other enterprises, under the name of Messrs. "BANE & Co." Right so far, for the operator is a bane to society. But having exhausted his list of known names, he is now putting up envelopes, printed with a neat mechanical device, which he sends to different parts of the country, addressed: "To any mechanic, in the Town of —, County of —, State of —," and requests the Postmaster to deliver the letter to some mechanic. Enclosed and sealed up are a lot of schemes, tickets, etc., with great inducements for investing from 25 cents to \$1 or more. We suggest to Mr. Bane, that his letters would be more appropriately addressed: "To THE GREATEST FOOL in the Town of, etc."

Pronunciation of Names.—J. M. Porter, Roxabel, Ohio. The names of the authors mentioned in your inquiry are pronounced as follows: Bonssingault, Boß-sang-go; Brandt, Brant; Buist, Bu-ist; Chorlton, Ch soft, as in cheese; Goodale, Goo'dale; Guenon, Gernnon, (G hard, as in get:) this is the nearest approach we can give to the French sound of the u in the first syllable. Leuchar, ch hard, as in chasm. Liebig, Lee-big; Youatt, Yoo-at.

"Stuffing" Live Poultry.—C. J. Waters, Broome Co., N. Y. This is practised extensively in Europe, and by some poultry raisers in this country. Fowls are confined in close dark quarters, and their crops are frequently filled with dough forced down their throats. By this treatment they may be made excessively fat, but it is doubtful if the meat can be wholesome, as the process is clearly an unnatural one—we need not say it is cruel. Plentiful feeding with grain and sour milk will make fowls plump enough for our use, "or any other man's."

Keeping Eggs in Bran.—M. A. Humphreys, Delaware Co., Pa., communicates to the *American Agriculturist* the following method for preserving eggs, which she says has been successfully practised in the family from the days of her grandmother of the 17th century. Prepare bran by drying it in a pan in the stove, to prevent its moulding. Place a layer of this in a box or barrel, then the eggs in regular rows, points downward, and thus with bran and eggs alternately, fill the vessel. They should be kept in a dry place and free from frost.

Sulphuric Acid (Oil of Vitriol).—To several querists. This is usually put up in Carboys, that is, large, thick glass bottles, which hold about 150 pounds each. These are each set in square boxes for carriage. The present price of sulphuric acid is 2½ cents per pound, wholesale. The carboys are charged for extra, at \$1.50 @ \$1.75 each, which price is refunded if the carboys are returned empty. This is the acid used for dissolving bones for manure.

To Dry Up Milk.—Robert H. Martin, Sussex Co., Del. A strong solution of alum in brandy rubbed on the udder of an animal a few times daily, will usually check the flow of milk, and relieve the animal from danger of garget, when the young are weaned, or it is desirable, from any cause, to dry them off. The wash should be applied as warm as can be borne by the hand.

Caterpillars.—"W. G. B.," of Newark, N. J., asks what he shall do of the caterpillars which are this year very abundant in his section.—We were in the neighborhood of Newark a few weeks ago, and saw large trees completely stripped of their foliage. We know of no remedy short of actual destruction. The work must begin with the season as soon as a nest is discernable.—Swabbing out the nest with some cheap oil, or removing the caterpillars by means of a spiral brush, sold for the purpose, are the usual methods of warfare.

Not Alone by Farmers is this journal taken and read, as we have abundant evidence. It is for the Household and the Garden, as well as for the Farm. Many thousands of copies are taken in this City, and in most of the villages in the country, by mechanics, professional men, tradesmen, and others. A letter before us, from interior New-York, mentions incidentally the occupation of ten subscribers, thus: 3 stone-cutters, 3 teachers, 1 blacksmith, 1 carriage-maker, 1 farmer, 1 editor.

Seeds by Mail.—A letter from the Office of the P. M. General informs us that the instructions under the new law are amended, so that packages of seeds, cuttings, roots, and cions, weighing not over thirty-two ounces may be franked by the Department of Agriculture. Heretofore the limit was fixed at twelve ounces.

Seeds of Ailanthus and Sweet Gum.—Irwin Folsom, Rockland Co., N. H. The seeds are usually kept by Thorburn & Co., and probably by other large seed dealers.

Insects Received.—I. P. Allen, Whiteside Co., Ill., sends us the beetle of the borer, which infests the Locust. This is the *Clytus pictus* of the Entomologists. Mr. A. says that the borers are entirely ruining the Locusts in his county, and is afraid that they will attack the fruit trees. We have never heard that this particular borer injured any tree except the Locust. The perfect insect or beetle feeds upon the Goldenrods and some other wild flowers, but the eggs, we believe, are deposited in the crevices of the bark of the Locust only. James Strang, Franklin Co., Ohio. The striped insects are *Chrysomela vittata*, and the black ones *Lytta pennsylvanica*. They are both blistering beetles, and have been used as substitutes for the Spanish Flies of the shops. They are very destructive to potatoes and many other plants. Catching by shaking them into a pan of water, or by sweeping the plants with a net of muslin and then killing them by heat, has been recommended. Mr. Goodyear, Butler Co., N. Y. The caterpillar was too much decayed to make out satisfactorily, but it is probably the yellow-necked apple tree worm—a

most voracious fellow. Your method of getting rid of them by cutting off the twigs and burning them is certainly effectual. Vocative, Philadelphia. The insect which appeared upon the Oats is probably the grain aphid which has been frequently noticed in our pages. The young of the Lady-bug is not injurious to vegetation, but is one of the farmer's friends, as it lives upon plant lice.

Splendid Flowers.—There have been several collections of flowers upon the exhibition tables at the *Agriculturist* office within a few weeks, which are so very fine that they deserve more notice than a mere acknowledgment in our list of articles exhibited. The fine display of gladioluses mentioned last month has been kept up. Mr. W. P. Wright, of Hoboken, contributed the finest Asters we have ever seen—some were as large as a medium sized Dahlia. Mr. W. Davidson, of Brooklyn, has paid great attention to the cultivation of the Verbena, and has shown a large number of the old kinds and a great many of his new seedlings, comprising some very fine and distinct sorts. W. & J. Cranston of Hoboken, and Mr. Pell of the N. Y. Orphan Asylum, have made fine displays of Dahlias, and P. Henderson of Jersey City, has shown a collection of new Petunias, many of which were remarkably distinct in their markings.

Training Grapes upon Fences.—"T. C." Kinks Co., N. Y. If the fence is a tight one, nail on blocks or short pieces of boards, or iron brackets for the wires, to keep the vines six to twelve inches from the fence. Air should circulate freely behind them. Besides, the leaves would "burn" if in close contact with the fence.

The Bourre Clairgeau Pear.—This variety bids fair to sustain a good reputation for quality, while its great beauty is much in its favor. One of the finest sights we have seen in a long time was a dwarf tree of this kind in full bearing in the grounds of E. Williams at Mont Clair, N. J.

Ground-Glass Shades.—A correspondent in Maine questions the correctness of the opinion that the amount of light transmitted through a ground-glass chimney or globe is as great as that transmitted by plain glass, and cites a record of experiments in the *American Journal of Science and Arts* for November, 1860, on the loss of light by glass shades, from which it appears that, while common window and plate glass intercepted from 4 to 13 per cent. of the rays, ground glass intercepted about 65 per cent., or in other words, reduced the illuminating power nearly two-thirds.

"The Portrait Monthly."—T. B. Leggett & Co., Publishers of the N. Y. Illustrated News, have commenced issuing under the above name, a monthly sheet of 16 pages, of the size of the pages of the *Agriculturist*, giving engravings of the noted men of the day, mainly army officers, accompanied with short sketches of the life and acts of each man. The work is well printed on heavy paper, and is probably the best thing of the kind issued so cheaply (\$1 a year). Few of the hastily executed newspaper wood-engraved portraits, can be called very accurate, or satisfactory likenesses, yet they give some idea of the general features and expression of countenance, and hence are better than nothing. Good Photographs, or steel engravings are of course preferable, when they can be obtained.

"Veronica quinquefolia" and the Rural New-Yorker.—In the September *Agriculturist* we took occasion to publish an exposition of what we supposed came legitimately under the head of humbugs, that is, the puffing of the medicinal qualities of a very common herb, by communications in such papers as would print such matter, and its sale by the writer of the articles, at a very exorbitant price. Our much respected contemporary, the *Rural*, quotes our article, and then undertakes to prove us in error as to our botany. It is not our intention to make any statement that cannot be substantiated, and in the case in point we had beforehand abundant evidence of the truth of our assertions; evidence which can be produced should it ever be necessary. Our statement was, that the plant in question, though called *Veronica quinquefolia*, was the well known *Veronica virginica*, also called *Leptandra virginica*. We might have added that the name *Veronica quinquefolia* was one unknown to science. The *Rural* says that it has received a specimen of the plant from W. R. Prince, and goes on to show, from its botanical characters, that it is not *Veronica virginica*, and indeed not a *Veronica* at all. As we do not know what plant has been sent to our friend by interested parties, we cannot say whether he is right or wrong in his conclusions, though we cannot help thinking that the number of characters he has made out, to show what the plant was not, ought to have enabled him to tell us what it was.

Our point was, that this "wonderful remedy," sold at a high price under the name of *Veronica quinquefolia*, was nothing but the old *Veronica* or *Leptandra virginica*. That this is the case we can prove beyond doubt, and as a part of our evidence of this we quote from the catalogue of W. R. Prince & Co., published in 1844, where on page 102 we find the following:

"*LEPTANDRIA VIRGINICA*.—N. B. This plant is noted for purifying the blood, and for cures of salt rheum, leprosy and dropsy. For the quantity of the root and prescription \$3."

Aside from the incorrect spelling of the name, *Leptandra* can any one doubt that this is the same thing?

We do not think that our article contained any misstatement, except perhaps the price at which the root is sold. We learned from two sources that it was sold for \$3 per ounce and two ounces for \$5. We have now before us a circular, in which the price is given "3 ounces, \$3; 6 ounces, \$5; 9 ounces, \$7 50; and 12 ounces, \$10." Prices sufficiently high to warrant our calling them exorbitant, when the same article is readily obtainable at the drug and herb stores at about a dollar a pound. We have seen it growing abundantly, and generally along water courses. Of its medicinal qualities, the United States Dispensatory says: the "*Leptandra virginica* or *Veronica virginica*,.... when recent, acts violently as a cathartic, and sometimes as an emetic.... It was formerly recognized in the U. S. Pharmacopœia, but was omitted in the edition of 1840."

The Ready Reckoner or Farmer's Manual, is the title of a work issued by Benj. Urner, N. Y., containing miscellaneous tables of measurement by farmers and others. With much useful matter it contains also information on many subjects of general interest, and is probably worth the price asked, \$1. The arrangement is very defective, the different subjects being thrown together heterogeneously.

A Californian Agricultural Fair.—We have the show-bills and programme of the Agricultural, Horticultural and Mechanics' Society of the Northern District of California, which held its fourth annual fair at Marysville during the week commencing the 7th of September. The premiums are ample and the rules liberal. As we received the announcement some days after the exhibition closed, we could not, of course, attend. We always receive these evidences of the Agricultural prosperity of California with gratification, and we hope before we are many years older to witness the wonderful improvement it has made in the peaceful art.

Dwarf Broom Corn.—C. D. Ellis, Essex Co., N. J. This variety was first brought to our notice by Mr. E. B. Good, of York Co., Pa., from whom seed was obtained and distributed free to *Agriculturist* subscribers. It grows about four feet high, the brush being about two feet long. We have not recently heard anything concerning it, and do not know whether it was generally liked. The first reports from growers and manufacturers were favorable.

New-Jersey State Fair a Failure. We feel personally mortified at the doings of one of the members of the *Agriculturist* family. For New Jersey we have a special regard; it is near "head-quarters;" the *Agriculturist* is peculiarly the agricultural paper of the State, as none other is permitted to live there. There are plenty of good farms and good farmers in the State, and whatever they really undertake, they do up well, as a rule. Few other States have done more to furnish men for the national defence. Perhaps it was their special interest in the raising of troops just now, that led them to forget the State Fair held in the name of the New Jersey farmers this year. From our particular interest in this State, we were present at the so-called State Fair, while we only sent representatives to other States. A visit of three hours was enough. If there were a county in New Jersey (happily there is not) which could not get up a better agricultural show than the State fair this year, we should advise that county not to try. On the "State Fair Grounds" at Patterson the agricultural display contained only two sheep; about thirty cattle (including calves), such as they were: a baker's dozen of hogs and pigs; any number of fast horses; two plowmen at the plowing match; one skrin of butter and four boxes of cheese, or two of butter and three of cheese, we are not certain which; about a dozen melons; a few beets; less than a bushel of potatoes (where was Monmouth County?) and other vegetables to match in quantity. and any number of peddlers within the enclosure, including gift enterprises, chance operators, and the man who sang to the crowd, ladies included, songs that were little adapted to ears polite, if other songs were like one got off, as we were necessarily passing, about the peculiar effects of lager beer upon the two sexes.—The show as a whole (except the horse races, which we did not stop to see,) was such a failure that we have no patience to speak of the few good

features we found in the fruit, household and implement departments. We regret to speak thus of the show of a State we have reason to especially regard, and do it "more in sorrow than in anger." Our only aim is to awaken the good farmers of New-Jersey to a sense of the disgrace put upon them, or perhaps put upon themselves, and to incite them to right action in the future. Monmouth County with its potatoes, and Bergen with its vegetables, can take the job and get up a big and useful display; but let the farmers of the whole State come together next year—at some central, accessible point—and show what New-Jersey can do when she tries. No State could beat her in a genuine exhibition of soil products.

Interesting to Flax and Hemp Growers and Manufacturers.—Congress having appropriated \$20,000 to be expended in investigations to test the practicability of preparing flax and hemp as a substitute for cotton, the Commissioner of Agriculture has placed the matter in the hands of three Commissioners, who call the attention of manufacturers to the subject. Samples of fibres and fabrics, with precise descriptions of processes, and statistics of cost, are to be sent to the Department of Agriculture at Washington, on or before November 20th. Parcels and letters should be endorsed, "For Commissioners of Flax Culture."

White Flax Seed.—Henry Gaylord, New Haven Co., Conn., sends us a sample of white flax seed, and asks if there is any difference between the fibre from this and that of the common seed. We have never seen the white seed before, except an occasional grain mixed with the brown and have no knowledge that the fibre is different from that of the ordinary kind.—We shall be glad to hear from any reader who can inform us.

What Success in Cotton Growing?—From many letters received last Spring we judged that a comparatively large area of cotton would be planted in some of the Northern States this year. Will those who have been engaged in the experiment please report to the *Agriculturist* their success or failure, and give such practical hints as their experience has suggested.

Large Yield of Potatoes.—Mrs. Elsie C. Wheeler, Essex Co., N. J., reports to the *American Agriculturist*, having planted a plot of ground, 61 feet by 89 feet, with Bulkley's seedling potato, and realized a return of 39 bushels—over 312 bushels per acre.

Native Tobacco.—Geo. H. Brown, Henley, Cal., sends seeds and specimens of a species of tobacco which grows wild in all parts of California. We suppose, from the limited specimen, that it is *Nicotiana rustica*. We have not known of any attempts to cultivate it, and can give no idea of its value.

Tobacco for Ants.—W. B. Waldo, of Dutchess Co., N. Y., informs us that, after trying various expedients for ridding his walks of ants, at length succeeded in clearing them out by the use of a strong decoction of tobacco.

Pear and Peach Trees in Michigan.—J. N. Lansing, Mich. In your locality we should prefer to "heel in" the trees, i. e. make a deep trench for the roots and cover them with a good amount of earth, in a sheltered situation. Plum and Cherry trees we should prune in June or July. Currant bushes may be pruned any time in Autumn.

Night-blooming Cereus.—We have a fine specimen of this beautiful flower from Mr. George Stillwagon, of Flushing, L. I. Thanks to the attention of Mr. S., we had the pleasure of seeing it also.

Plants for a Name.—Mrs. N. Gougan, Wild Co., Ill., sends *Anagallis arvensis*, the Pimpernel, which she says is a cure for hydrophobia. We never before heard of its having any medicinal qualities.... "Spivins," Piqua, Ohio. The specimen came in rather bad order, but it seems to be *Quamoclit coccinea*, own brother to the Cypress Vine, and probably not a cross as you suppose.... S. A. Decker, (no place) sends the Bitter Sweet, described on another page.... Mr. Seelbach, Baltimore. The plant is probably *Cleome pungens*, but the specimen is too small for accurate determination.... H. H. Ackerman, Bucks Co., Pa. The seeds look like those of the Hollyhock, but as there are other nearly related plants, we can not be sure from the seeds only.... G. W. Goodwin, Conn., *Lythrum Salicaria*, the Spiked Loosestrife. It grows wild in some parts of your State, and is often cultivated.... Mrs. Julia H. Mack, Richland Co., Wis. The least sent is that of the Canarybird Flower (*Tropaeolum peregrinum*), a climbing species of the Nasturtium of the gardens. It is a charming climber, and an annual.

Probably the flower buds of your lilacs are winter killed.... E. W. Daniell, Meigs Co., Ohio. The grass is *Uniola latifolia*, the Broad-leaved Spike-grass. It is one of the most beautiful of our native grasses and worth cultivating for ornamental purposes.... Mariette M. Herring, Winnebago Co., Ill. Your plant is *Mertensia Virginica*, (formerly called *Pulmonaria*) the Virginian Cowslip or Lungwort. It is one of the most beautiful of our native plants, and better deserves cultivation than many imported ones. The plant is a perennial, and if it does not perfect seed, may be propagated by division of the root.... T. E. Goodrich, Ford Co., Ill., sends *Tradescantia Virginica*, noticed in the August basket. There are several varieties, all easily cultivated and very pretty. In botanical names when there are more than three syllables the accent is on the last but two, and thus: *Tradescantia* a *Vir-gin-i-ca*. The name *officinalis*, which is often used as a specific name, comes from the Latin *officina*, a shop, and is applied to many plants which were or are sold as drugs in the shops.

Spontaneous Generation.—P. Garabrant, Morris Co., N. J., proposes to leave to the *Agriculturist* the settlement of the question "Will ground germinate grain or weeds if there are no seeds in it?"—If Mr. G. has read the back volumes of the *Agriculturist* he will have seen that we have taken very strong ground against spontaneous generation. We have no proof that plants are multiplied in any other than the way provided by nature. With all the knowledge we have at present, we should answer his question with an emphatic NO.

Mixing of Strawberries.—L. C. Church, Plymouth Co., Mass. It is likely that strawberries with perfect flowers will mix more or less, if planted together, but as this will not materially affect the fruit, it is of no practical consequence, unless you wish to preserve the seeds or plants of any particular kind in a pure state.

A Good Tomato.—The Fejee is a good tomato. It is of medium to large size, nearly smooth, of a dark red, or salmon color, with a solid, meaty flesh, and is of fine flavor. If tomatoes were sold by weight—which really gives their value—the overgrown, deep scalloped sorts which have to be broken into pieces before they can be peeled, would be discarded. Any smooth, solid tomato is preferable to the irregular ones, but commend us to the Fejee, *alias* Lester's Perfected.

"Big Things."—J. D. Ellis, Columbia Co., N. Y., writes to the *American Agriculturist*, condemning the mania for producing "big things." He asks, "Why is a pumpkin weighing 200 lbs. better than five weighing 40 lbs. each; or a strawberry that must be carved like a muskmelon, more desirable than a larger number averaging one to a mouthful?" In some things, undoubtedly there is little gained by enlarging specimens to unusual size; but in many fruits and vegetables large growth gives superior quality. Thus the apple, peach, cherry, etc., are improved by increase of size. But even where this is not the case, producing extraordinary specimens is merely a gratification of curiosity, an innocent though perhaps unprofitable amusement.

Great American Exhibition of Pumpkins, Squashes, and Ornamental Gourds.

The Second Annual Exhibition of PUMPKINS, SQUASHES, AND ORNAMENTAL GOURDS, at the office of the *American Agriculturist*, 41 Park Row, New York City, opens on Wednesday, Nov. 4th, 1863, and the following Prizes will be paid by the Publisher, upon the official award of competent Committees.

CASH PREMIUMS.

A—For the Heaviest Pumpkin or Squash.....	\$10.00
B—For the 2nd Heaviest Pumpkin or Squash....	5.00
C—For the 3d Heaviest Pumpkin or Squash....	3.00
D—For the Best Pumpkin or Squash for cooking.	5.00
E—For 2nd Best Pumpkin or Squash for cooking.	3.00
F—For the largest yield on a single Vine.....	10.00
G—For the 2nd largest yield on a single Vine....	5.00
H—For the largest and finest collection of Fanciful or Ornamental Gourds.....	7.00
I—For the 2nd largest and finest collection of Fanciful or Ornamental Gourds.....	4.00

*All to be grown by one person and to be accompanied by positive evidence from the grower, and one disinterested person who assists in gathering the specimens.

Note 1.—The specimens receiving the Prizes will remain on Public Exhibition at the pleasure of the Publisher who offers the prizes. The other specimens will be subject to the order of the exhibitors, or they will be sold at auction, or otherwise disposed of, for their benefit.

Note 2.—All Exhibitors must notify us of their intentions by Oct. 15th, and deliver specimens for competition on or before Nov. 2d. Specimens to be delivered free of charge.

Note 3.—The same specimen can compete for only one of the premiums offered above. See note, p. a 292.

Exhibition Tables at the Office of the American Agriculturist.

The following articles have been placed on our tables for exhibition since our last report:

FRUITS.—Apples: Red Astrachan, from A. J. Hall, Wallingford, Conn.... Specimens for name, and St. Lawrence; T. Briggs, Schaghticoke, N. Y.... Benoni Apples, fine; James Weed, Muscatine, Iowa.... Hyslop Crab Apple, (described under "Basket:") H. A. Conger, White-water, Wis.... Specimens kept from last year; Wm. Tefft, Fordham, Mass.... Specimens for name; Wm. Howe, Mt. Vernon, N. Y.... Cranberry Pippins grown in 1862, very fine; Robert Benner, Astoria, N. Y.... Pears: Bartlett and Doyenne Boussock; Wm. Doty, Union Hill, N. J.... Specimens for name; Wm. Van Brunt, L. I.... Fine clusters of Seckels; Peter Voorhees, Nyack, N. Y.... Peaches: Specimen for name; J. W. Hughes, Staten Island, N. Y.... Fine basket Crawford's Early; C. W. Idell, West Washington Market, New-York City.... Seedling; Wm. L. Plume, Brooklyn, N. Y.... Grapes: Hartford Prolific; Prof. Hopkins, Metuchin, N. J.... Hartford Prolific; Wm. H. Mitchell, Harlem, N. Y.... Northern Muscadine and Hartford Prolific; G. R. Garretson, Flushing, L. I.... Early Canada or August Grape; Mr. Ripley, South Windsor, Conn.... Hartford Prolific; Wm. Tefft, Fordham, Mass.... August Pioneer; John Friske, Holliston, Mass.... Berries: Cut-leaved Blackberry; S. A. Halsey, Astoria, N. Y.... Lawton Blackberry; Jno. B. Peck, Yonkers, N. Y.... Twice bearing Raspberry, Belle de Fontenay, Pink Blackberries, and late Strawberries; Wm. F. Heins, Morrisania, N. Y.... Miscellaneous Fruits: Ripe Figs, large and fine; M. J. Taylor, Jr., Southport, Conn.... White Japan Melon; Mr. Godfrey, Westport, Conn.... Skillman's Netted Musk Melons, splendid specimens; Richard Bennett, Fort Hamilton, N. Y.... Plum for name; L. Pfenniger, Brooklyn, N. Y.... Cape Cod Cranberry Plant, in fruit; Wm. H. Starr, New-London, Ct.... Nectarine; B. N. Leonard, Brooklyn, N. Y.

FLOWERS.—Cut Flowers and Asters in pots; O. Judd, Flushing, N. Y.... Dahlias, Carnations, Roses, etc.; C. S. Pell, New-York Orphan Asylum.... Canna Indica, very fine; Wm. F. Heins, Morrisania, N. Y.... Fine colored Seedling Petunias; Peter Henderson, Jersey City, N. J.... Balsams; Mr. Petrick, Union Hill, N. J.... Double Sunflower, *Imperiale*, perfect specimen; Lewis A. Burt, Tremont, N. Y.... Magnificent collection of Gladioli; Andrew Bridgman, 678 Broadway, New-York City.... Dahlias, Seedling Phloxes, Petunias, Heliotropes and Double Balsams, very superior; W. & J. Cranston, Hoboken, N. J.... *Bilbergia fulgens* in bloom; Isaac Buchanan, West 17th-st., New-York City; Night-blooming *Cereus triangularis*; A. P. Cummings, New-York City.... Cut Flowers; Mrs. John Harper, East 82d-st., New-York City.... Splendid collection of Seedling Verbenas; Wm. Davison, Brooklyn, N. Y.... *Caladium nymphaefolium*; Wm. Heins, Morrisania, N. Y.... Magnificent collection of Asters and Zinnias; W. P. Wright, Weehawken, N. J.... Balsams, Prince's Feather, Coxcomb, and Fancy Gourds; Wm. B. Westcott, 309 Madison-st., N. Y.... Balsams; Mrs. Wm. Hamon, N. Y.

VEGETABLES.—Curious growth of Sweet Corn; Wm. Bergen, East New-York.... Cucumber grown in Bottle; E. W. Probasco, Clinton, N. J.... Tree Tomato, extra; G. M. Usher, Port Richmond, N. Y.... Cucumber and Melon hybridized; H. W. Olcott, Mt. Clair, N. J.... Fejee Tomato; Dr. A. Barber, Brooklyn, N. Y.... White Cucumber, very fine; W. G. McLaughlin, Harlem, N. Y.... Cuban or Grape Tomatoes; W. M. Doty, Union Hill, N. J.... Long Blood Beet, Red Turnip, Yellow Tomatoes, Curious growth of Carrot and Tomato, superior Corn, and Lima Beans; J. W. Perkins, St. Joseph's Hospital, N. Y.... Purple Egg Plant, improved variety, White Egg Plant, Okra, Beefsteak, Yellow Plum, Yellow Cherry, Red Plum, Fig, Apple, and Cuban Tomatoes, and Winter Cherries; Wm. F. Heins, Morrisania, N. Y.... Large Purple Egg Plant, weighing 4½ lbs; John G. Freeman, Ravenswood, N. Y.... Sugar Beets; John B. Vroom, Blooming Grove, N. Y.... Fancy Gourds; Daniel Rankin, Mt. Vernon, N. Y.... Peach-Blow Potatoes, good, first crop from Scrub-Oak land; M. Foley, Central Islip, N. Y.... Two Purple Egg Plants, very large, weight 5½ and 7½ lbs; Mrs. A. A. McElwee, Walker Valley, N. Y.... Cucumber, 3½ lbs., and Long-necked Squash, 20 lbs.; W. C. Aubert, New-Durham, N. J.... Fejee Tomatoes; W. W. Davis, 130 Grand-st., Jersey City, N. J.... Tree Tomato, curious specimen; G. M. Usher, Port Richmond, N. Y.... Purple Egg Plant, largest, weight 8 lbs. 10 oz.; Robert McGarrey, gardener to Frederick Wiggins, Rye, N. Y.

MISCELLANEOUS ARTICLES.—Specimen of Raw Silk; O. U. de la Harpe, Great Salt Lake City, Utah.... Red Currant Juice preserved in bottle; Wm. M. Doty, Union Hill, N. J.... Mediterranean Wheat; A. Mine, Stamford, Conn.... Mammoth Millet; Mrs. A. A. McElwee, Walker Valley, N. Y.... Fruit of Skunk Cabbage, (*Symplocarpus fatidus*); J. M. Knowlton, Tarrytown, N. Y.

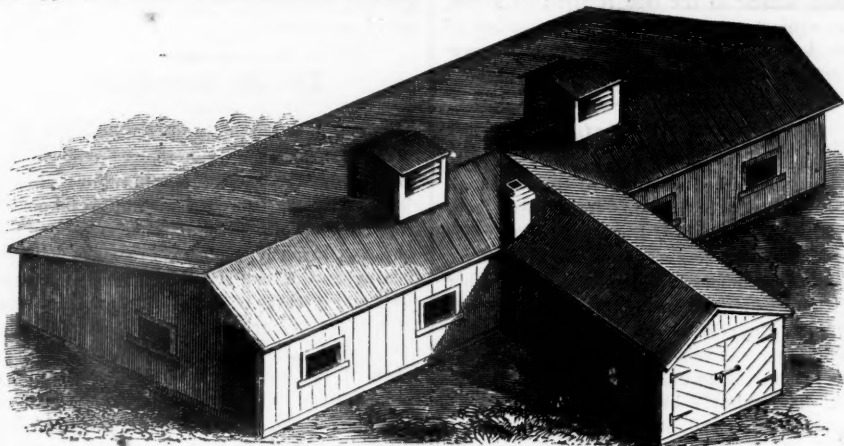


Fig. 1.—ELEVATION OF PIGGERY.

Care of Swine—Plan of a Piggery.

Because swine are blessed with keen appetites, strong digestion, and hardy constitutions capable of resisting a great amount of neglect and ill-usage, they have been, and in too many instances yet are, the worst used animals kept for the profit of man. And as if to add to the abuse, their endeavors to make the best of ill treatment, has been charged to the account of their natural uncleanness, and the idea that wholesome meat can not be made by feeding animals with garbage, has caused pork to become the horror of dietetic reformers, who pronounce it unfit for human food. It were as wise to condemn the use of milk, and to pronounce cows unfit for civilized communities, because some individuals persist in confining them in filthy stables, and dosing them with distillery slops. In his native state, the hog is as dainty in his taste as other animals, and his lair is found in a dry situation, well cushioned with clean leaves, unsoiled by any neglect of his own. Civilization has affiliated him with the degraded members of the human species, and brought his name to reproach by associating it with the vile among men. Within a few years past, however, a change for the better has been apparent, and many readers of the *Agriculturist* are inquiring for good plans for piggeries, for the best methods of rearing and fattening swine, and other kindred matters pertaining to their welfare and ultimately to the profit of their owners. It would be within the mark to say that in most instances, twenty per cent of saving can be effected in food, and in additions to the manure heap, by a well regulated building for the accommodation of swine. We therefore take pleasure in laying before our readers the accompanying illustrations engraved from plans forwarded by Mr. Roseburgh, of Amboy, Ill. They were designed and constructed for use on his

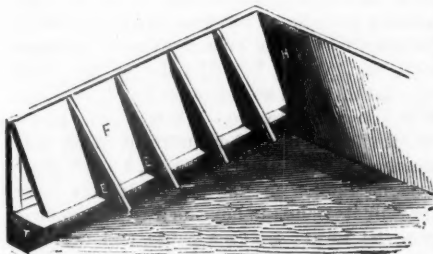


Fig. 2.—FRONT PARTITION.

own premises, and have therefore the merit of being the production of a practical man.

Fig. 1, represents the elevation. The main

building is 22 by 50 feet, and the wing 13 by 16 feet. It is supplied with light and air by windows in front, ventilators on the roof, and by hanging doors or shutters in the upper part of the siding at the rear of each stall or apartment—these last are not shown in the engraving.

Fig. 3, shows the ground plan. The main building has a hall, *H*, 6 feet wide, running the entire length. This is for convenience of feeding, and for hanging dressed hogs at the time of slaughtering. The remainder of the space is divided by partitions into apartments, *A*, *B*, for the feeding and sleeping accommodation of the

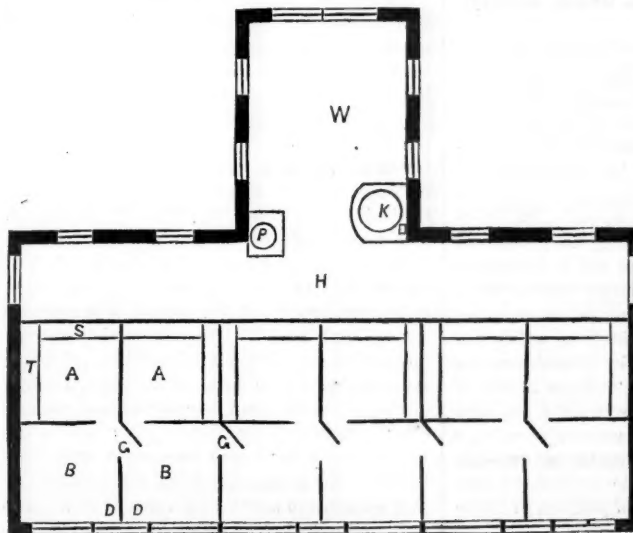


Fig. 3.—GROUND PLAN OF PIGGERY.

porkers; these are each 8x16 feet. The rear division of each apartment, *B*, is intended for the manure yard. Each apartment has a door, *D*, to facilitate the removal of manure, and also to allow ingress to the swine when introduced to the pen. The floors of each two adjoining divisions are inclined toward each other, so that the liquid excrements and other filth may flow to the side where the opening to the back apartment is situated. Two troughs, *S*, *T*, are placed in each feeding room. That in the front, *S*, is for food, and *T*, for clear water, a full supply of which is always allowed. This is an important item, generally overlooked; much of the food of swine induces thirst, and the free use of water is favorable to the deposition of fat.

An excellent arrangement (shown in Fig. 2.) is adopted to facilitate the cleaning of the troughs, and the transferring of the hogs to the main hall at slaughtering. The front partition of each apartment, *F*, (fig. 2.) is made separate,

and contrived so as to be swung back, and fastened over the inside of the trough, *T*, at feeding time, or when cleaning the trough. It may also be lifted as high as the top of the side partition, *H*, when it is desired to take the hogs to the dressing table. Triangular pieces, *E*, *E*, are spiked to each front partition, and swing with it, forming stalls to prevent their crowding while feeding. These are supported, when the apartment is closed, by notches in the inner edge of the trough, made to receive them.

The wing, *W*, is 12 by 16 feet. This answers for a slaughtering room. In one corner, adjoining the main hall, is a well and pump, *P*, from which, by means of a hose, water is conveyed to the troughs. At the opposite corner, *K*, is a large iron kettle, set in an arch, for cooking food, and for scalding the slaughtered swine. We would suggest that in many localities it would be a desirable addition to have this wing built two stories high, the upper part to be used for storing grain for the hogs, and also that a cellar be made underneath for receiving roots.

The Care of Horses.

Some persons, in their anxiety to subdue their horses, take every opportunity to worry and beat them, "to let the beasts know who is master," they say. They whip, scold, and beat them on principle. Now, who does not know that such treatment addressed to a child, with the idea of subduing him, would inevitably sour his temper, and render him disobedient and obstinate? As certainly will this be the case in the discipline of a domestic animal. Instead of this, it should be our aim to let the horse know and feel that we are friendly to him and desire his well-being. This may show itself by avoiding whatever will tend to annoy and provoke him, by kindness in the tone of voice, in the way of handling him, by occasionally fondling and stroking him, and by various unmentionable things which will at once occur to those

familiar with this noble animal. He will understand their meaning, and they will affect his character. A horse so treated, will be a pleasant beast to handle, he will keep and fatten better, will be in better health, and will do more work than one managed differently. This should be done from the animal's earliest years, but even if neglected while young, the horse may thus be taught to love his owner.

Regularity and system.—This will show itself in determining the time and amount of feeding and of working. Nearly all the diseases to which the horse is subject, come from irregularity in these respects. If he is under-fed and over-worked, the tone of his system will become relaxed, and disease be likely to set in. So if he is over-fed, and has deficient or irregular exercise, he will contract another set of diseases. The man who is regular and systematic in his own habits of living, is most likely to enjoy health and long life, while he who indulges in

excesses of any kind is sure to suffer from frequent and violent attacks of illness, and end his days prematurely. It is hardly less so with man's favorite animal, the horse.

Change of diet, cleanliness, and good shelter should not be overlooked. For the horse running at large, as in the wild state, the diet which nature gives him is all-sufficient, but for one confined, stabled, and worked, much attention should be given to his food. Hay and oats are doubtless the best food, all things considered, but even these should have an occasional variation. Carrots, potatoes, bran, fresh cut grass, should be given him in their place and time. During Summer it seems only simple justice that, when practicable, the horse should be treated for a time to that food which is most natural to him—fresh grass. If every stabled, hard working horse could have a summer vacation of several weeks in a pasture, it would soften his dry and cracked hoofs, correct his digestion, improve his wind, his skin, and indeed renovate his entire system. But where this indulgence can not be enjoyed, a horse should have frequent messes of loosening food, such as roots, bran mash with cut straw, fresh grass, etc.

As to cleanliness, both good looks and health demand this. A horse well curried will make a peck of oats go much further than one ungroomed. Good shelter saves many a horse from taking cold when coming in from work, and adds much to his health and daily comfort.

Diseases in Animals—A Useful Society.

Announcement is made in English Journals of the formation of a "Society for the Prevention of Disease among Domestic Animals." The prospectus declares that in Great Britain, live stock to the amount of \$30,000,000 is annually destroyed, principally by contagious diseases. It is proposed by the Society to aid in reducing this enormous loss, by collecting information and statistics concerning the diseases of animals; by affording advice and assistance to stock-owners, wherever general outbreaks of disease occur; by ascertaining periodically the health of stock in the countries from which foreign animals are derived; by stimulating inquiry as to the most advantageous means of disposing of diseased animals or their produce, so as to secure the largest amount of salvage for stock owners, and by adopting all possible means to check such a traffic in diseased animals as tends to the spread of plagues, or to the sale of diseased meat to the public.

This movement is not without interest to stock breeders on this side the Atlantic. The importation of cattle and sheep to the United States is yearly increasing, and already we have had in the pleuro-pneumonia excitement, an experience of the disastrous results which may come without some proper precautionary measures. It would undoubtedly be a proper subject for legislation to devise means whereby the importation of diseased animals could be prevented. Quarantine laws are very stringent as regards persons coming from unhealthy ports, and it need not be stated that the sale of diseased animals often proves of fearful detriment to the public health. But, as all are aware, years of agitation and discussion of a subject are usually required before legislative action can be had, and meantime, the evil may be upon us. We know of no way in which the matter can better be brought before the public, and if needed, the enactment of proper laws be finally secured, than by the formation of a

society similar to the one referred to above. This subject may well claim the attention of State Agricultural Societies, and to their especial notice we commend it.

Glanders in the Horse.

The most marked symptom of this fatal malady in horses, is a discharge from one or both nostrils. As, however, the same appearance may follow other less severe disorders, no horse should be condemned as glandered, unless other well marked indications of this disease are observed. Mayhew in his "Illustrated Horse Doctor," gives in substance the following directions for making an examination of a suspected case. The animal's head should be turned toward the strongest light attainable. The examiner should then place himself by the side of the horse's head, not in front, but in a situation where, if the animal snort, the person is in no danger of having the ejected matter thrown upon him. Such an occurrence might be followed by the most serious consequences, as the discharge from glanders is very poisonous, and if absorbed into the system would cause death. The examiner should raise the wing of the nostril and inspect particularly the membrane situated more internally than the skin, seen at the commencement of the nostrils. This membrane is easily distinguished by its fleshy and moistened aspect, as well as by its situation, the termination of the skin being marked by a well defined margin. If, on this membrane, any irregular or ragged patches are conspicuous, if these patches are darker toward their edges than in their centers, and if they nevertheless seem shallow, pallid, moist, and sore, the animal may be rejected as glandered. Should any part of the membrane after having been wiped with a bit of tow, seem rough, or have evidently beneath its surface, certain round or oval shaped bodies, the horse is assuredly glandered. The membrane may present a worm eaten appearance, or be simply of a discolored, and heavy hue. In the first case the animal ought to be condemned; in the second, it is open to strong suspicion. The other general symptoms of glanders are: first, loss of appetite, quickened pulse, and a staring coat. Soon after, a slight discharge issues from the nostril, and usually one of the lymphatic glands grows fast to the jaw, becomes hard and insensitive, and from being wholly imperceptible in the healthy animal, enlarges to about half the size of a chestnut. Ultimately the discharge thickens, encrusting the hairs over which it flows, and adhering to the edges of the nostril. This is finally followed by ulceration of the internal parts of the nose, until death relieves the animal.

No successful treatment has yet been found for glanders, and hence the greater necessity for prevention. It may result primarily from the impure air of ill ventilated and foul stables, from neglected catarrh, or from long continued exhausting labor, with stimulating food. It is also highly contagious, so that the infection may be taken from a stable where a glandered horse has been kept. An animal in high condition contracting this disease by infection, will usually have it in the most acute form, and die within a short period. If it has been engendered by natural causes, it may remain chronic and in an undeveloped stage for years. Horses in such a case are most dangerous, as they are capable of imparting the disease to others, while it may not be suspected in themselves. When once it is clearly determined that a horse is thus

afflicted, the sooner he is dismissed from the world, the better for him and the community.

The Bar Horse-Shoe.

Though it is not advisable to adopt this shoe often, or long at a time, there are occasions when it is very useful. By continuing such a shoe around the heels, the pressure is taken off from one part and is equally diffused over the whole. Obviously, such a contrivance is beneficial when the hoof is cracked, when corns appear, and in cases of thrush. After it has been worn three or four weeks, or as soon as the disease abates, it should be dispensed with. If not taken off, the frog of the foot will suffer under the continued pressure of the bar. Whenever this shoe is used, care should be taken in driving to avoid slipping. Neither heavy draft nor great speed should then be required of the horse.

Scratches in Horses.

C. G. Siewers, Campbell Co., O., gives his experience as follows: "The best remedy I have every tried is to walk the horse up and down in running water two or three times a day, for a few days; this always cures my horse. The cause I ascribe to a filthy stable, as my horse never gets the scratches, unless I employ a certain lazy farm hand in the neighborhood for a makeshift; he and the scratches come together."

How to Send Grain to Market.

To the Editor of the American Agriculturist:

It is unaccountable to me that so many farmers have not yet learned how to send hay and grain to market, so as to make them pay the most profit. I see boat loads and car loads of such produce passing through my neighborhood on its way to your city, hundreds of miles distant. It brings prices that would make a Western farmer's pocket jingle merrily, only that a large part of the money stops in the hands of the transporters, to pay freight. Now, railroads and canal boats are excellent institutions, but I have never yet found so good a way to send corn to market, as on the four legs of a well fattened animal. A bullock, or a hog will pack away a few bushels of corn more snugly than any freight master could do, and it brings better prices after they have worked it over into beef and pork, than in the raw state. With the exception of wheat, and perhaps rye, I would not sell a peck of grain from my farm, except for seed. Along in the Summer, when pasture is scarce, and plenty of cattle are to be picked up, I secure enough to consume all the corn I can spare, over what will be needed to fatten my hogs, (these I raise at home,) and just before cool weather commences, I set the beef factories to work. The chips give me profit in the shape of manure, enough to make the operation pay, even if I could only get the same price for the grain as before feeding it out; but there is a gain here, too. When I read about Illinois farmers and others using corn for fuel because it is cheaper than coal, I think they need instruction on this point. If they have not capital enough to buy stock to eat up their grain, let them borrow the cattle, and agree to return so many pounds of fattened beef, for each animal, in the same way that sheep are taken on shares; it would be mutually beneficial to themselves, and to those who have more animals than they can keep profitably. I

know that many men living on new lands will laugh at the idea of using manure, but the laugh will be on the other side not many years hence, when their lands begin to show signs of weakness, as those of western New-York have done. It is very easy to keep a soil fertile, but a slow and costly operation to restore a worn out one. But whether the manure be used or not, I believe it will be found to pay to feed out grain before sending it to market. JONATHAN.

Sale of South-Down Sheep at Thorndale

The large amount of space devoted to a full report of the sale of South-Down sheep from the flock of Mr. Samuel Thorne, is justified by the fact that it is of general, we may say national importance. The beneficial influence which the dispersing of such improved stock through the country will have on our flocks, can hardly be estimated. As is well known, the animals disposed of by Mr. Thorne, were descendants or direct importations from the best flocks in the world, and it may be questioned whether a collection of sheep can be found even in England, superior to that from which these were sold. In answer to inquiries made of Mr. Thorne, we learn that the 81 ewes disposed of as reported below, yielded at the last shearing 419 lbs. of clean wool, an average of 5 lbs. 2½ ozs. per head. The rams were shorn unwashed, and gave from 8 to 12 pounds per head. Another fact of much interest may be stated for the benefit of many readers of the *Agriculturist*, who have made inquiries upon the subject. A cross of the South-Down ram upon the Merino ewe, produces the finest sort of lambs for marketing. This has been practised at Thorndale for years, and Mr. T. informs us, has proved one of the most profitable parts of sheep husbandry.

The recent sale, held Sept. 2d, was very well attended, the day being propitious, and the bidding was spirited, although prices were hardly what might have been anticipated in view of the demand for sheep, and the reputation of the flock. However, as will be seen below, enough was realized to prove that the raising of improved sheep is a business that will pay. Want of space compels us to omit further introduction.

EWES.

YEARLINGS.

1. Ewe by Archbishop, dam by No. 6, grand dam an imported Ewe, from the flock of Henry Lugar, Esq.; To P. W. Jones, Amherst, N. H. \$25 00
2. Do. by do, dam by imported Prize Ram 112, g. dam an imported Ewe as above; J. C. Tatum, Woodbury, N. J. \$22 00
3. Do. by do, dam by No. 6, g. dam an imported Prize Ewe; Hon. E. Cornell, Ithaca, N. Y. \$20 00
4. Do. by do, dam by Young Salisbury, g. dam an imp. Prize Ewe; G. H. Brown, Wash'n Hollow, N. Y. \$26 00
5. Do. by do, dam by No. 6, g. dam an imp. Prize Ewe; Hon. E. Cornell, Ithaca, N. Y. \$21 00
6. Do. by do, dam by No. 6, g. dam an imp. Prize Ewe; Hill & Jones, Delaware, Ohio. \$37 00
7. Do. by do, dam by No. 6, g. dam by 112, gr. g. dam an imp. Ewe from Duke of Richmond's flock; G. H. Brown, Washington Hollow, N. Y. \$41 00
8. Do. by do, dam by No. 19, g. dam an imp. Ewe, as above; Hon. E. Cornell, Ithaca, N. Y. \$38 00
9. Do. by do, dam by No. 6, g. dam an imp. Webb Ewe; Hill & Jones, Delaware, Ohio. \$40 00
10. Do. by do, dam by 112, g. dam an imp. Webb Ewe; R. A. Alexander, Woodburn, Ky. \$41 00
11. Do. by do, dam by No. 6, g. dam an imp. Webb Ewe; Hon. E. Cornell, Ithaca, N. Y. \$37 00
12. Do. by do, dam by No. 6, g. dam an imp. Webb Ewe; G. H. Brown, Millbrook, Wash'n Hollow, N. Y. \$41 00
13. Do. by do, dam by Young Salisbury, g. dam by No. 6, gr. g. dam by 112, gr. g. dam, an imp. Webb Ewe; J. S. Homans, New-York. \$31 00
14. Do. by do, dam by No. 19, g. dam by 112, gr. g. dam, imp. Richmond Ewe; Hon. E. Cornell, Ithaca, N. Y. \$33 00
15. Do. by do, dam by Young Salisbury, g. dam by 112, gr. g. dam an imported Prize Ewe; J. C. Tatum, Woodbury, N. J. \$30 00
16. Do. by do, dam an imp. Webb Ewe, by Reserve; Wm. Hurst, Albany, N. Y. \$30 00
17. Do. by do, dam an imp. Webb Ewe, by Young Norwich; R. A. Alexander, Woodburn, Ky. \$51 00
18. Do. by do, dam an imported Webb Ewe, by Henry Webb's Pet; R. A. Alexander, Woodburn, Ky. \$51 00
19. Do. by imp. No. 14, dam by Young Salisbury, g. dam by 112, gr. g. dam, an imported Prize Ewe; Hon. E. Cornell, Ithaca, N. Y. \$39 00

20. Do. by do, dam by No. 6, g. dam an imp. Ewe; Hon. E. Cornell, Ithaca, N. Y. \$43 00
21. Do. by do, dam by No. 6, g. dam an imported Lugar Ewe; Hon. E. Cornell, Ithaca, N. Y. \$37 00

Average.....\$35 39

EWES—TWO-YEARS OLD.

22. Ewe by No. 5, dam by No. 6, g. dam an imp. Prize Ewe; Hon. E. Cornell, Ithaca, N. Y. \$46 00
23. Do. by do, dam an imp. Prize Ewe; R. A. Alexander, Woodburn, Ky. \$50 00
24. Do. by do, dam an imp. Prize Ewe; G. H. Brown, Washington Hollow, N. Y. \$51 00
25. Do. by do, dam an imported Ewe; Hon. E. Cornell, Ithaca, N. Y. \$50 00
26. Do. by do, dam by No. 6, g. dam an imp. Prize Ewe; Hon. E. Cornell, Ithaca, N. Y. \$46 00
27. Do. by do, dam by No. 6, g. dam an imp. Prize Ewe; J. W. Alsop, Middletown, Conn. \$40 00
28. Do. by do, dam by No. 6, g. dam an imp. Ewe; Hon. E. Cornell, Ithaca, N. Y. \$45 00
29. Do. by do, dam by No. 19, g. dam an imp. Richmond Ewe; G. H. Brown, Wash'n Hollow, N. Y. \$51 00
30. Do. by do, dam an imp. Webb Ewe; Sandford Howard, Boston, Mass. \$66 00
31. Do. by do, dam an imp. Webb Ewe; Hon. E. Cornell, Ithaca, N. Y. \$45 00
32. Do. by do, dam an imp. Webb Ewe; R. A. Alexander, Woodburn, Ky. \$30 00
33. Do. by do, dam an imp. Webb Ewe; Sandford Howard, Boston, Mass. \$63 00
34. Do. by do, dam by No. 6, g. dam an imp. Webb Ewe; Sandford Howard, Boston, Mass. \$45 00
35. Do. by No. 31, dam by 112, g. dam an imp. Lugar Ewe; Hon. E. Cornell, Ithaca, N. Y. \$53 00
36. Do. by do, dam by 112, g. dam an imp. Prize Ewe; Hon. E. Cornell, Ithaca, N. Y. \$37 00
37. Do. by do, dam by 112, g. dam an imp. Webb Ewe; Sandford Howard, Boston, Mass. \$51 00
38. Do. by do, dam an imp. Webb Ewe; S. W. Robbins, Wethersfield, Conn. \$53 00
39. Do. by do, dam by No. 6, g. dam by 112, gr. g. dam an imp. Webb Ewe; G. H. Brown, Wash'n Hollow, N. Y. \$65 00
40. Do. by do, dam by 112, g. dam an imp. Webb Ewe; G. H. Brown, Wash'n Hollow, N. Y. \$60 00

Average.....\$59 37

EWES—THREE YEARS OLD.

41. Ewe by Young Salisbury, dam an imp. Prize Ewe; R. A. Alexander, Woodburn, Ky. \$52 50
42. Do. by do, dam an imp. Webb Ewe; G. H. Brown, Wash. Hollow, N. Y. \$43 00
43. Do. by do, dam by 112, g. dam an imp. Richmond Ewe; Sandford Howard, Boston, Mass. \$45 00
44. Do. by do, dam an imp. Webb Ewe; R. A. Alexander, Woodburn, Ky. \$45 00
45. Do. by No. 6, dam by 112, g. dam imp. Lugar Ewe; R. A. Alexander, Woodburn, Ky. \$40 00
46. Do. by do, dam by 112, g. dam an imp. Webb Ewe; Wm. Hurst, Albany, N. Y. \$40 00
47. Do. by do, dam an imp. Lugar Ewe; J. C. Tatum, Woodbury, N. J. \$32 00
48. Do. by do, dam by No. 19, g. dam an imp. Lugar Ewe; G. H. Brown, Wash'n Hollow, N. Y. \$38 00
49. Do. by do, dam an imp. Lugar Ewe; J. C. Tatum, Woodbury, N. J. \$30 00
50. Do. by do, dam an imp. Webb Ewe; G. H. Brown, Wash'n Hollow, N. Y. \$93 00
51. Do. by do, dam by 112, from an imp. Richmond Ewe; E. Thorne, Po'keepsie, N. Y. \$25 00
52. Do. by do, dam an imp. Webb Ewe; J. S. Homans, New-York. \$37 00
53. Do. by do, dam an imp. Webb Ewe; G. H. Brown, Wash'n Hollow, N. Y. \$37 00

Average.....\$42 25

EWES—FOUR YEARS OLD.

54. Ewe by No. 6, dam an imp. Lugar Ewe; E. Thorne, Po'keepsie, N. Y. \$35 00
55. Do. by do, dam an imp. Prize Ewe; S. W. Robbins, Wethersfield, Conn. \$31 00
56. Do. by do, dam an imp. Webb Ewe; F. P. Kincaid, Spring Station, Ky. \$37 00
57. Do. by do, dam an imp. Webb Ewe; J. S. Homans, New-York. \$33 00
58. Do. an imp. Webb Ewe by Reserve; Wm. Hurst, Albany, N. Y. \$31 00
59. Do. an imp. Webb Ewe by Young Norwich; Wm. Hurst, Albany, N. Y. \$51 00
60. Do. an imp. Webb Ewe by Reserve; Wm. Hurst, Albany, N. Y. \$45 00
61. Do. an imp. Webb Ewe by Young Salisbury; E. Thorne, Po'keepsie, N. Y. \$40 00
62. Do. an imp. Webb Ewe by the sire of Archbishop; Wm. Hurst, Albany, N. Y. \$48 00

Average.....\$39.

MISCELLANEOUS.

64. Ewe by 112, dam an imp. Lugar Ewe; P. R. Close, Greenwich, Conn. \$35 00
65. Do. by No. 6, dam by 112, g. dam an imp. Richmond Ewe; J. W. Alsop, Middletown, Conn. \$39 00
66. Do. by do, dam an imp. Webb Ewe; R. A. Alexander, Woodburn, Ky. \$28 00
67. Do. by 112, dam an imp. Lugar Ewe. \$26 00
68. Do. by No. 6, dam by 112, g. dam an imp. Richmond Ewe; J. W. Alsop, Middletown, Conn. \$23 00
69. Do. by do, dam an imp. Prize Ewe; S. T. Angel, Salt Point, N. Y. \$36 00
70. Do. by 112, dam an imp. Webb Ewe; Wm. Hurst, Albany, N. Y. \$42 00
71. Do. by do, dam an imp. Prize Ewe; R. A. Alexander, Woodburn, Ky. \$40 00
72. Do. by do, dam an imp. Prize Ewe; J. W. Alsop, Middletown, Conn. \$30 00
73. Do. by No. 19, dam by 112, g. dam from an imp. Richmond Ewe; E. Griffin, Clinton Corners, N. Y. \$29 00
74. Do. by 112, dam an imp. Webb Ewe; J. S. Homans, New-York. \$23 00
75. Do. imported from the flock of the late Jonas Webb, Esq.; J. S. Homans, New-York. \$30 00
76. Do. imported from the flock of Henry Lugar, Esq.; J. W. Alsop, Middletown, Conn. \$22 00
77. Do. an imported Lugar Ewe; J. H. Allen, Pleasant Valley, N. Y. \$28 00

79. Do. by 112, dam an imp. Richmond Ewe; J. H. Allen, Pleasant Valley, N. Y. \$20 00
80. Do. by do, dam an imp. Lugar Ewe; D. Haywood, Copake, N. Y. \$25 00
81. Do. by do, dam an imp. Prize Ewe; J. H. Allen, Pleasant Valley, N. Y. \$30 00
82. An imported Prize Ewe; Wm. Hurst, Albany, N. Y. \$18 00
83. An imported Webb Ewe; J. S. Homans, New-York. \$14 00

Average.....\$25 59

RAMS.

1. Imported Prize Ram Archbishop; G. H. Brown, Washington Hollow, N. Y. \$500 00
[He was selected and purchased from the flock of the late Jonas Webb, Esq., in 1860, at a cost of 250 guineas (\$1250). He won the 1st Prize in the Yearling Class that season at the Royal Show, and, as will be seen by reference to the catalogue of Mr. Webb's last Southdown Sale, was used more largely by him than any other Sheep.]
2. Three yrs. old Ram by Young Salisbury, dam an imported Prize Ewe; John Bard, Barrytown, N. Y. \$30 00
3. A two yrs. old by No. 5, dam by No. 6, g. dam an imported Prize Ewe; G. Armstrong, Orange Co., N. Y. \$25 00
4. Do. bred by the late Jonas Webb, Esq., got by 88, dam by Reserve; E. Thorne, Po'keepsie, N. Y. \$125 00
5. Do., same as No. 4; Josiah Kirk, Sag Harbor, L. I. \$40 00
6. Yearling, by No. 14, dam by Young Salisbury, g. dam by 112, gr. g. dam imp. Webb Ewe; J. C. Tatum, Woodbury, N. J. \$30 00
7. Do. by Archbishop, dam an imp. Webb Ewe by Reserve; Thos. George, Newburgh, N. Y. \$52 00
8. Do. by do, dam an imp. Webb Ewe, by Young Norwich; P. W. Jones, Amherst, N. H. \$17 00
9. Do. by do, dam an imp. Webb Ewe, by Reserve; Sandford Howard, Boston, Mass. \$131 00
10. Do. by do, dam by Young Salisbury, g. dam by 112, gr. g. dam imp. Lugar Ewe; J. Robinson, Clinton Corners, N. Y. \$28 00
11. Do. by do, dam by No. 6, g. dam an imp. Prize Ewe; A. W. Storie, Dutchess Co., N. Y. \$30 00
12. Do. by do, dam by No. 6, g. dam by 112, gr. g. dam an imp. Richmond Ewe; J. O. Sheldon, Geneva, N. Y. \$55 00
13. Do. by do, dam by Young Salisbury, g. dam by 112, gr. g. dam an imp. Lugar Ewe; E. M. Bottsford, Newtown, Conn. \$26 00
14. Do. by do, dam by 112, g. dam an imported Prize Ewe; Sandford Howard, Boston, Mass. \$57 00
15. Do. by do, dam by 112, g. dam an imp. Prize Ewe; E. Thorne, Po'keepsie, N. Y. \$70 00
16. Do. by do, dam by 19, g. dam by 112, gr. g. dam imp. Richmond Ewe; P. W. Jones, Amherst, N. H. \$41 00
17. Do. by do, dam by No. 6, g. dam an imp. Prize Ewe; Wm. Hurst, Albany, N. Y. \$50 00
18. Do. by do, dam an imp. Webb Ewe by Reserve; Sandford Howard, Boston, Mass. \$35 00
19. 6 yrs. old, by 112, dam an imp. Prize Ewe; F. P. Kincaid, Spring Station, Ky. \$50 00

Average.....\$73 26

Two of the animals advertised, Lots No. 63 and 65, died before the sale, leaving 100 the number actually sold. The average price obtained for the whole was \$44.92.

THE RAMS REFERRED TO IN THE FOREGOING PEDIGREES, ARE AS FOLLOWS:

112. (Galety) was imported from the flock of the late Jonas Webb, in 1833. Winner of 2d Prize at the Royal Show at Lewes, was purchased at Mr. Webb's Annual Letting for 130 guineas (\$650).

No. 6 sire 112, dam an imported Webb Ewe. He was winner of First Prize at the U. S. Show in 1856, and of First Prize in Aged Class at N. Y. State Fair in 1859.

No. 19, sire 112, dam an imported Prize Ewe. Young Salisbury was bred by the late Jonas Webb, sire the First Prize Yearling Ram at Salisbury.

No. 14, bred by Wm. Rigden, Esq., Brighton, England. Winner of the First Prize at Chichester in 1860.

No. 5, sire 112, dam an imported Ewe from the flock of Henry Lugar, Esq.

No. 30, sire No. 6, dam by 112, g. dam an imp. Webb Ewe. Winner of First Prize in the Aged Class, at the N. Y. State Fair at Watertown, in 1860.

Spreading Straw, or Composting it.

We are often told of the fine effect produced by simply spreading straw on land in the Fall, and allowing it to lie and rot. It protects the roots of clover and grain in the Winter, and shields them from burning suns the following Summer. This practice is common at the West and South. On the large wheat fields of those sections, it would be quite laborious to haul grain home to the barn-yard for threshing, as we do at the North and East, and then after it had been fed out or mixed with manure, to cart the straw dung back again in the Spring.

The western plan doubtless has its advantages. Yet we question whether the waste of straw is not more than enough to pay for the extra labor required by the eastern practice. When left on the field, straw has little manurial value. It is dry, woody matter, and amounts to little more than a good mulch. If drawn to the cattle sheds and housed, it would serve in part as a coarse fodder, and as litter for all kinds of stock. It is of no slight importance to keep stock clean and warm in Winter. Then, by absorbing their liquid excrements and being mixed with the solid, it makes a large stock of valuable manure.

Fig. 1.—BITTER-SWEET (*Solanum Dulcamara*.)

Talks About Weeds....V.

POISONOUS PLANTS.

Several inquiries have recently been made at the office of the *Agriculturist* concerning the alleged poisonous qualities of two very common plants, the Bitter-Sweet, and the Nightshade. These are both species of the genus *Solanum*, to which the potato also belongs. The Bitter-Sweet is *Solanum Dulcamara*, a perennial half-shrubby vine, with leaves presenting a considerable variety in shape, but generally with two ear-like lobes at the base like those represented in the engraving. The flowers are borne in clusters, their purple star-shaped corollas and bright yellow stamens making them quite showy: these are followed by a berry about the size of a pea which is bright red when ripe. In Autumn, the brilliant fruit of the vine makes it very conspicuous and attractive. The plant is sometimes cultivated as an ornamental vine; it runs to the height of 8 or 10 feet, and is used like other climbers to cover walls and unsightly buildings. Bitter-Sweet is a native of Europe, but it is found growing wild in most of the settled portions of this country. It is found in waste places, along the borders of meadows, etc. A recent case, in which three children died suddenly, was attributed to poisoning by eating the fruit of the Bitter-Sweet. It is not known positively that the children partook of the fruit, but as there was a plenty of it to which they had access, it is supposed that it caused their death. Since this circumstance came to our knowledge, we have been at some pains to look up the records, and find that there is a great diversity of opinion as to the poison-

ous character of the berries. Some high European authorities state that they are positively deleterious, while others declare that they are harmless. We can only account for this diversity of opinion by supposing that difference of soil might vary the character of the plant. It is well known that the active properties of plants are greatly modified by differences of climate. We are disposed to regard the plant with suspicion. An infusion of its twigs is sometimes used medicinally, and narcotic effects have been produced by an overdose; although it does not follow that the berries possess the same properties as the twigs, yet in the present uncertain state of our information, we should advise discarding the plant altogether from cultivated grounds. The berries are so showy that they are likely to tempt children to eat them; though we can not say that they are poisonous, we are not able to say that they are harmless, and we would advise our readers not to tolerate the plant, as the risk is altogether too great.—Another species, *Solanum nigrum*, the Common Nightshade is very common about dwell-

ings, and is often found as a weed in gardens. It is a coarse annual, 1 to 2 feet high, and very much branched. Figure 2 will give an idea of the shape of the leaf. The flower is white and the berries black. This plant is much more common than the Bitter-Sweet, but not being so showy either in its fruit or flowers, is much less

Fig. 2.—NIGHTSHADE (*Solanum nigrum*.)

likely to be noticed. The remarks upon the poisonous qualities of the Bitter-Sweet will apply also to this. It should be exterminated.

A "Shocking Horse."

This name does not, in the present instance, indicate a four-legged beast afflicted with heaves, spavin, etc., but a simple contrivance to facilitate the shocking or "shooking" of corn, as cut at the ground. Though long in use in some parts of the country, and heretofore described in the *Agriculturist*, it may be new to many of our readers. It consists of a light pole, *a*, 16 to 18 feet long, with two supporting legs 5 feet from



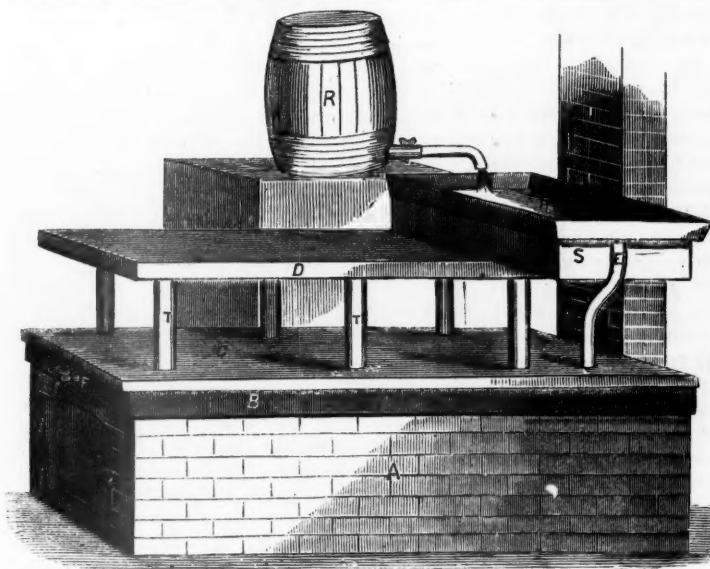
the end, and a cross pin, *b*, about 4 feet long, 2 feet from the end, at right angles with the pole. This pin should be about an inch in diameter, and the hole to receive it made large enough to allow it to be slipped in or out easily. This implement is to be placed with the pin where the shock is to stand, the stalks set up in the four corners, and when the shock is made, the pin and pole may be withdrawn and the apparatus moved to the place for the next shock. It will save considerable time in setting up the first stalks, which are usually placed about a standing hill, and will also obviate the necessity of afterward tearing open the shock to get at the uncut stalks, when the corn is to be husked.

Wheat on Clover Sod.

C. S. Mason, Wayne Co., N. Y., writes to the *Agriculturist*: "I have always had the best success in sowing wheat on sod ground. I mow clover one year only for hay, and after cutting, turn the sod under five or six inches deep, and harrow lengthwise once, and then diagonally once. The wheat is drilled in from the first to the tenth of September. Sod ground will stand drouth, or if the season be wet, the water has a chance to drain off. The wheat grows strong in Autumn, stands Winter better than if sown after barley, oats, or peas, and ripens early."

[We know by successful experience and by much observation, that turning under a heavy growth of clover, is an excellent preparation for a wheat crop. The clover gathers from the atmosphere a large amount of nitrogenous material, which is specially adapted to the wants of wheat, while the buried roots and stems help to keep heavy soils light and porous. Our practice at the West was to sow clover on the wheat in Spring, pasture it in Autumn, mow the next year, and then turn under a heavy second growth, and sow wheat directly upon it, without a second plowing. Or, after having pastured it in Autumn, the following Spring the stock were kept off, and the first growth was plowed in while in bloom. This was left fallow, the weeds were harrowed down occasionally, and in Autumn the field was thoroughly harrowed and cross-harrowed, and the wheat was sown. This latter plan was adopted when the wants of stock required the pasturage in Autumn, or when the soil needed recruiting by the heavy sward and first large growth of clover. This treatment gave an increased crop of wheat every second or third year on the same land, besides the hay and pasturage.

When needed, a top-dressing of plaster was sown on the wheat in Spring, with the special object of promoting a strong growth of clover. The effect of this application was very distinctly seen, when a land was left unplastered.—Ed.]



Miles' Improved Sap Boiler.

The apparatus represented in the above illustration was devised by Henry Miles, Addison Co., Vt., who sends a drawing and description for the *American Agriculturist*, with the remark that it is not yet patented, and perhaps never will be. It was intended for evaporating maple sap, but is equally applicable to boiling down sorghum juice. As it contains some novel features, which Mr. Miles considers valuable, we publish it for general examination. In the sketch, A, represents the arch, built in the ordinary manner, to accommodate the boiling pan, B, resting upon it. The pan is of sheet iron, 20 inches wide, and 6 inches deep. A rim of hemlock strips, 2½ inches wide, fitting close within the edge of the pan, is added to prevent the sap or syrup from boiling over. The pan is furnished with a faucet, F, through which to draw off the syrup. A cover of boards, C, nearly steam tight, is placed over the pan, resting upon the rim. In this cover, 1½ inch holes are bored to receive hollow posts or tubes, T, T, to convey the steam to a wooden conductor, D. These posts or tubes are each 9 inches long, and 2½ inches in diameter. The dimensions of the conductor are not given, but the drawing indicates a wooden box with an interior, 12 inches wide, and 3 inches high. The conductor, D, conveys the steam to the steam box, S, (dimensions not given) in which rests the heater, H, a sheet iron pan, 20 inches square and 3 inches deep. An opening from the steam box, not shown in the engraving, allows the escape of the waste and condensed steam. A wooden tube, E, passes from the heater, H, to near the bottom of the boiling pan, B. The reservoir, R, for receiving the cold sap, is placed above the level of the heater, H, and is connected with it by a tube.

The object of this arrangement, as will be readily seen, is to use the steam escaping from the boiling liquid, to heat the raw sap before its introduction into the boiler. At first it would seem that any obstruction interposed to the freest escape of the steam, would require an increase of heat and consequently of fuel to expel it, and that this would more than counterbalance any advantage accruing from heating the sap with the steam. Mr. Miles asserts that his experience and that of his neighbors, has proved that there is an actual gain in fuel by covering the boiling pan, from the fact that the external cold air is excluded, which would abstract a

great amount of heat from the boiling surface. He says that the steam will take good care of itself, and find its way out without any difficulty, and that the heat imparted in its passage through the condensing box, will be sufficient to raise the cold sap to nearly the boiling point. Our own idea of evaporation has always been, that there should be the largest possible surface of liquid exposed directly to the air, in order to get the best results. The air acts as a sponge to suck up the fluid, so to speak. It is well known that evaporation goes on most rapidly when the atmosphere is dry, and when a current of air passes over the surface of the fluid. In the apparatus here proposed, a moist atmosphere, or rather pure steam is constantly over the boiling liquid. On further considering the subject, we are inclined to think the amount of heat saved in barely bringing the cold sap to a boiling heat would hardly repay the loss incurred in evaporating under cover. We may perhaps be in error. A practical test would be to evaporate a certain amount of sap, with the cover on, and the same quantity with it off, and compare the amount of fuel consumed.

Cheap and Good Straw Hives.

E. J. Ferris, of Lake Co., O., J. T. Smith, of Unlontown, and several others, inquire how to make the straw hives referred to in the July *Agriculturist*. While at M. Quinby's, we examined quite a variety of straw hives, mostly patented by different parties. We will describe one of the best forms, one which is unpatented, and can be made by any person with moderate skill. The size depends upon what is required. If for a particular kind of honey-boxes or movable frames, the size must be

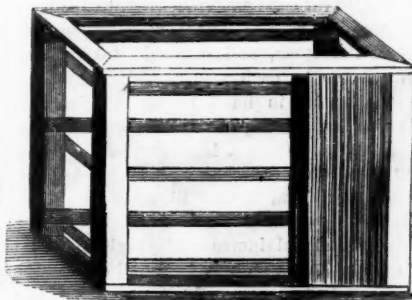


Fig. 1.—FRAME FOR THE STRAW.

made to correspond with what is wanted. It is a square or parallelogram, to be covered with a flat board to receive the surplus boxes, and over this a wooden box with sloping or flat roof, and projecting over the sides to shed rain. The essential part or body of the hive is made as follows: For the upright corner-pieces, cut 2-inch square stuff to the required length.

Upon the *inside* of these nail three pieces of lath for the sides and ends, putting one strip around both top and bottom, and one in the middle, as seen in fig. 1. Then nail flat thin strips, 2 inches wide, around the top and bottom, covering the ends of the uprights, as also shown in fig. 1. Next cut clean, straight straw, in a cutting-box, to just the required length to fit into the sides. Pack this straw in firmly upon the sides, and nail strips of lath on the outside, as shown in fig. 2, and the thing is done. To prevent crowding off the inside strips while packing in the straw, it is well to have a false box just the size of the inside, and slip this in while packing the straw. To prevent the spreading of the lath, bind them together at the middle points with wire running through the straw, especially on the longer sides of the hive. Straw hives are grateful to bees, cool in Summer and warm in Winter, and with the straw standing perpendicular, as above described, it sheds off all rain. As 2 inches thickness of straw would seem to be more than is needed, if the corner-pieces be 2-inch stuff the outside slats might be

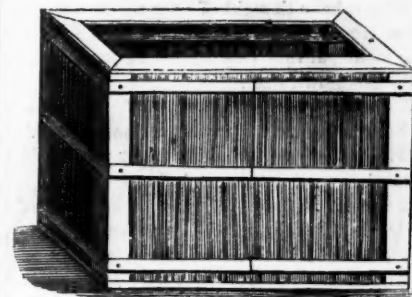


Fig. 2.—THE STRAW FRAME COMPLETED.

let into the pieces the depth of their thickness, though this would somewhat increase the labor of making them. They are quickly and cheaply made, and are neat in appearance, especially if the wood be planed; this is not essential, however. If the wood-work be painted, they will look still more attractive.

For the *American Agriculturist*.

A Cure for the Sorrel.

The death of this pest would be hailed with as great joy as that of poor Cock Robin was with grief. The bull could afford to pull the bell that rang its death knell, for henceforth hay would be more plentiful in many a scanty meadow. But it is not dead, as the meadows with their large red patches testify. It is found not only in the fields of the slothful, but in those of the diligent. To be sure it is most abundant on the former. Mr. Slack descants upon the adhesive qualities of sorrel thus: "It is of no use to try to get rid of it. It is one of those things that is doomed to come. Wan't weeds a part of the curse upon the soil? What is to be, will be, and there is no use in fighting against nature." Slack is provoked at any complimentary allusion to the ruddy aspect of his fields. Pray don't sorrel grow every where? Not exactly every where. It is found in great abundance on old meadows where the grass begins to fail. The philosophy of this fact may be that the grass has sucked out all the aliment in the soil suited to its nature, and the sorrel comes in as a succession crop. It is worthy of notice that sorrel abounds in soils that have been long manured with uncomposted fish. This manure stimulates the land to a large production of cereals, and when it is laid down to

grass, it very soon relapses into sorrel. It also comes in extraordinary quantities upon reclaimed swamp land imperfectly drained.

Now the remedy I have to propose for sorrel, is an old fashioned one, and requires money and labor. Apply manure either as a top dressing or for hoed crops. Every farmer must have observed that sorrel is not troublesome upon a rich, newly seeded meadow. The clover overshadows it, if it undertakes to grow, and the herds-grass and other grasses obscure it for several years. The sorrel is only a gentle hint from nature, that the last grist of manure put into her hopper is ground out, and needs to be resupplied. You can have fodder only as you keep the hopper full. If the soil is wet, there is no effectual remedy but in drainage. In upland meadows the manure will last several years. When the sorrel reappears, apply manure, and if the grass is feeble, sow grass seed at the same time.

CONNECTICUT.

Tim Bunker on Starting a Sugar Mill.

"Who'd have thought of ever seeing a sugar mill in Hookertown!" exclaimed Seth Twiggs as he looked at that new institution just put up on the Shadtown road.

"And such lots of sorghum too," said Deacon Smith. "Almost every farmer has a patch."

"The age of meracles ain't past yet," said Tucker in a meditative mood.

"I wonder if there'll be any rum made of the leavings," inquired Jones expectantly, recalling his experience on a sugar plantation.

"Not a bit of it," said Seth, with a twinkle in his eye and an extra puff at his pipe. "Suckers will go dry in these parts."

Ten years ago, I should as soon have thought of seeing an elephant in my barn yard, as of seeing a sugar mill in Hookertown. In the first place there was nothing to make sugar of, except a few maple trees, and they did not require a mill. And then there was not enterprise enough to start a new project of that magnitude. We, most of us, believe in foreordination and had not put down sugar making as among the things that were destined for Hookertown. We expected always to get our sweetening by barter, just as our fathers and mothers did before us—a pound of cheese for a pound of sugar, and brown sugar at that. We expected too to eat a slave-grown article because we could not get any other. But they say they are getting off the notion of forced labor on the sugar plantations, in Louisiana, and I suppose when the Fates got to making a change, they thought they might as well make a change all around, and have free sugar North and South. At any rate it is a settled fact, that we have a sugar mill, where they are going to make molasses this Fall, and where they may make sugar by and by. I suppose half the farmers in town won't pay a dollar for sweetening next year, and some will have a few barrels of syrup to sell. The world moves, notwithstanding the war, and I am not sure but the war has given a good many enterprises a new hoist. You see it has made sugar and molasses dear, and that has set Yankee wit at work to get these things out of our own soil. In raising sugar at the North, it makes a great deal of difference whether that article is eight cents or sixteen cents a pound.

We have been getting ready for this business some years. The seed sent out from the *Agriculturist* office, introduced the plant, and taught us that we could grow it as well as corn. Jake Frink could see that it looked like broom

corn, and was no humbug. It would pay to raise it for fodder for cattle, and hogs ate it greedily, and would thrive upon it wonderfully well. There was no chance to lose much. Some made syrup from it, the first year, and put it up in bottles, and exhibited it at the county fair. It looked like syrup, tasted like it, and went well on buckwheat cakes. But we had no mill to grind the cane, and no conveniences for boiling down the juice, and that was the great objection to going into the business.

Last Winter we talked the matter up in the Farmers' club. Men in whose judgment we had confidence, said the thing would pay. Mr. Spooner, who is ready for every good word and work, said there was no good reason why we should not make our own sweetening, at home; that the farmers in the town paid out twenty thousand dollars every year for this article, and they might just as well keep that amount in their own pockets. Deacon Smith read extracts from the agricultural papers, showing what they were doing out West, raising two and three hundred gallons of syrup to the acre, and clearing over a hundred dollars above working expenses. He said the crop last year was worth several millions of dollars, and that the business was increasing rapidly wherever they had learned to make the syrup.

Seth Twiggs said they had started a mill at Smithtown, and it worked well. He brought along several bottles of the syrup made at the mill, and to convince the skeptical, sent it around for trial. It was found that it made good gingerbread, it sweetened coffee, and filled the place of molasses completely. After a fair trial, and several weeks talking, in which every man made sure that the syrup would not bite, we got the club up to the question—"Shall Hookertown have a sugar mill?" This was the name the thing seemed to take of itself, though I suppose they will make nothing but syrup at present. It was agreed that the syrup was the thing we all wanted, and we were all ready to go into it if the thing could be made to pay. Two men agreed to build the mill, and put into it every thing necessary to grind the cane and boil the syrup, if they could have cane enough to make it an object. They wanted three hundred acres pledged. This, with what they raised themselves, they thought would make it a safe enterprise.

To get the cane pledged in a community of small farmers, many of them not having more than ten acres under the plow, was a good deal of an undertaking. It was agreed to appoint a committee for each school district, to see how much could be raised. There were fifteen districts in the town, and it would take about twenty acres to each district. Mr. Spooner took the matter in hand in his district, and worked as hard as any of us. Some subscribed two acres, and some a half acre. We raised about three quarters of the pledges here, and for the rest we had to go to Shadtown.

The results of the Winter's work are, that we have a wonderful increase of sorghum in all this region. A patch may be found on all the best farms and on some of the poor ones, and even in the gardens of the mechanics. A quarter of an acre of sorghum will make a barrel of syrup, if it does only moderately well. We shall not have syrup enough to supply the town, perhaps, but we shall give the business a good start, and wake up the sleepers. I should not think it strange if we became exporters of syrup in a few years, and Connecticut syrup may yet stand as high in the market, as Connecticut River shad. The mill is all up, and the

machinery in, and they will be ready to grind as soon as the cane is fit. I do not see any reason why New England should not raise its own molasses. We have plenty of unoccupied land, and capital to invest in the crop, and in mills to manufacture it. All that is needed, is a few individuals in each town to talk the matter up, and show how it can be done. There must be concert of action, and then the whole business will go easy. The sorghum is coming into favor much more rapidly than the potato did, and it would not be strange if it wrought as great changes in our husbandry.

Hookertown, } Yours to command,
Sept. 10th, 1863. } TIMOTHY BUNKER ESQ.

Gift Enterprises and Other Humbugs.

We had supposed that the "Gift Enterprise" business was about "played out" in this country, since the frequent and thorough exposures of the knavish character of the business, which have from time to time appeared in the *Agriculturist*, and various other journals. Occasionally however, we receive a circular indicating that there are yet parties ready to be duped by golden promises, and rogues prepared to take advantage of their ignorance. One of these programmes is now before us. It dates from a "National Art Gallery," and proposes to sell "Twelve Magnificent Steel Plate Engravings," at the low price of *One Dollar* each, and to furnish with each engraving a valuable gift, valued at from 50 cents to \$100. In addition to all this, 50 United States Bonds of \$100 each are offered as additional premiums, and "as each print will have a limited issue of less than ten thousand copies, these Bonds must soon be distributed." In what manner the distribution is to be made, is not stated. As the "fools are not all dead" yet, we suppose some investments will be made by those who have not already been "bitten" by the same operator.

"Honor among thieves" has long since passed into a proverb, but its fallacy is being continually shown. A recently exposed swindle is in point. Letters marked "strictly private" were received by numerous parties, in which the writer proposed to sell them gold coins of the denomination of \$1, at 50 cents each. They were warranted to be such complete imitations of the genuine, as to defy detection; not even the banks would refuse them. None but a rogue, or a man of very weak honesty, would bite at such a bait, but the temptation proved too strong for many, who forwarded the dollar, and received their coins in return. As was promised, they readily passed as genuine, "even at the banks." Elated with their success, the dupes speedily sent larger amounts, from \$5 to \$25 for more coins, but they could get no replies. It turned out that the specimens first sent as a bait, were genuine coin, but the rascal appropriated all additional remittances, rightly judging that parties attempting to purchase counterfeit money, would be in no haste to complain of the swindle to the authorities. Ultimately, however, the matter was brought to light, and the ingenious operator is now in confinement awaiting his trial. He deserves punishment for holding out the temptation to the unwary, of making money dishonestly. The rule heretofore given needs to be often repeated, viz.: *avoid dealing with all parties who offer to give more than a dollar's worth for a hundred cents.* They can not continue to fulfill such contracts without dishonesty to some one, and the loss will usually fall upon those who are caught by splendid offers in circulars and advertisements.

Useful Rules for Measurement.

I submit for the benefit of readers of the *American Agriculturist* a few rules for ascertaining the capacity of vessels, and for the measurement of solids of the descriptions named. It is unnecessary to state their importance to all who have to measure grain and other produce, and the necessity of being able to estimate accurately the capacity of vessels temporarily made, as well as those permanently used; and as it is well known that very many of those who are passing large quantities of goods of all sorts through their hands daily, do not know how to ascertain the correctness of the capacity of the vessels they are in the habit of using, and may therefore unknowingly cheat or be cheated, the necessity of such a knowledge is evident.

1.—To find the cubical contents of rectangular vessels.

RULE.—Multiply the length by the width and height.

Example.—What is the cubical contents of a vessel 30 inches long, 30 inches wide, and 60 inches high?
 $30 \times 30 \times 60 = 54,000$ cubic inches, *answer*.

2.—To find the cubical contents of cylindrical vessels.

RULE.—Multiply the square of the diameter by .7854, and the product by the height.

Example.—What is the cubical contents of a vessel 30 inches diameter and 60 inches high? *answer.*
 $30 \times 30 = 900 \times .7854 = 706.86 \times 60 = 42,411.6$ cubic inches.

3.—To find the cubical contents of rectangular tapered vessels, mathematically called prismoids and frustrums of a pyramid: used for agricultural purposes in weigh-hoppers, etc.

RULE.—To the sum of the area of the two ends add four times the area of the middle in a line parallel to the base, and multiply this sum by one-sixth of the perpendicular height.

Example.—What is the cubical contents of a vessel 60 inches high, 21 inches square at the top, and 40 inches square at the bottom?

$20 \times 20 = 400$, area of top.
 $40 \times 40 = 1600$, area of bottom.
 $4 \times 30 \times 30 = 3600$, four times area of middle. *answer.*
 5600×10 , (one-sixth of the height,) = 56,000.

4.—To find the cubical contents of round tapered vessels, (frustrums of cones.)

RULE.—To the sum of the square of the diameter of the two ends add four times the square of the diameter of the middle: multiply this sum by .1309, and the product by the perpendicular height.

Example.—What is the cubical contents of a vessel 30 inches diameter at the top, 40 inches diameter at bottom, and 60 inches perpendicular height?

$20 \times 20 = 400$, square of top diameter.
 $40 \times 40 = 1600$, square of bottom diameter.
 $4 \times 30 \times 30 = 3600$, four times square of middle diameter.
 $5600 \times .1309 = 733.04 \times 60 = 43,982.4$, *answer*.

In the 3rd and 4th examples, the middle diameter or distance across is obtained by adding the diameter of the top and bottom together, and dividing the amount by 2.

A bushel contains 2150.42 cubic inches, 1.244 or nearly $1\frac{1}{4}$ cubic feet, or 9.31 gallons. A gallon contains 231 cubic inches, and there is therefore 7.48 or nearly $7\frac{1}{2}$ gallons in a cubic foot. Hence, dividing the number of cubic inches contained in a vessel by 231, we find the number of gallons; or, dividing by 2150.42, we have the number of bushels it contains. Or if the contents of the vessel is given in cubic feet, then, by multiplying them by 7.48, (or $7\frac{1}{2}$), we find the number of gallons; dividing by 1.244, (or $1\frac{1}{4}$), gives the number of bushels it contains. As, however, there are many men who can easily do the first four rules in arithmetic, but are puzzled at, or altogether unable to work out decimals, I subjoin the two following rules by which they may find out the number of gallons or bushels a vessel contains, without the use of decimals. These rules, it will be observed, are only for the calculation of gallons and bushels in round vessels; for their actual cubical contents, they must be worked out by the first four rules.

5.—To find the number of gallons and bushels in a cylindrical vessel with parallel sides, as, for example, a bushel measure.

RULE.—Multiply the square of the diameter in inches

by the height in inches, and divide the product by 294 for gallons, or by 2738 for bushels.

Example.—What is the number of gallons and bushels contained in a vessel 30 inches diameter and 60 inch high?
 $30 \times 30 = 900 \times 60 = 54,000 \div 294 = 183\frac{1}{2}$ gallons, and
 $54,000 \div 2738 = 19\frac{5}{7}$ bushels, *answer*.

6.—To find the number of gallons and bushels contained in round taper vessels.

RULE.—To the sum of the square of the diameter of the two ends add four times the square of the diameter of the middle: multiply this sum by the height, (all in inches,) and divide the product by 1764 for gallons, or by 16,428 for bushels.

Example.—How many gallons and bushels are contained in a vessel 30 inches diameter at top, 40 inches diameter at bottom, and 60 inches perpendicular height?

$20 \times 20 = 400$, square of the top diameter.
 $40 \times 40 = 1600$, square of bottom diameter.
 $4 \times 30 \times 30 = 3600$, four times square of middle diameter.
 $5600 \times 60 = 336,000 \div 1764 = 190\frac{1}{4}$ gallons, and
 $336,000 \div 16428 = 20\frac{4}{9}$ bushels, *answer*.

Although as has been remarked, the 5th and 6th rules are to facilitate the calculations of the description of vessels named, by those who do not understand decimals, it will be apparent at a glance that they are simple, and useful to all who have such calculations to make.

A similarity in the whole of the examples given will be observed. This is done to enable a comparison to be made in the contents of vessels of similar sizes, but of different shapes.

Schenectady Co., N. Y.

WM. TOSHACH.

For the *American Agriculturist*.

A Clay Soil no Curse.

How often do farmers whose lands are clayey, complain of their hard, stiff soils, so inclined to be cold and wet in Spring, baked hard in Summer, and tedious to work at all times! Very well, these are bugbears to shiftless farmers, but not so to enterprising men. Wet and cold in Spring? Shows they need draining. Baked stiff in Summer? Shows they need manuring and diligent working. Tedious to till at all times? Yes, very likely, more toilsome than sandy land; but then how much more productive and durable. In his "Principles of Agriculture," Thae says: "Land should be chiefly valued according to its consistence; the greater the degree of this quality which it possesses, the nearer does it approach to first class land; but the smaller the proportion of clay, and the larger the quantity of sand which enters into its composition, the more rapidly does it fall in value." What say Jersey and Long Island farmers to that? What say the Arab farmers to the value of their shifting sands? Are not the clay lands of old England the most productive that the world has ever seen? Clay, if not mixed with foreign and noxious ingredients, contains in itself elements of fertility. It holds the rich deposits of many ages, which only need bringing to the influence of air and tillage to make them yield their riches to the cultivator.

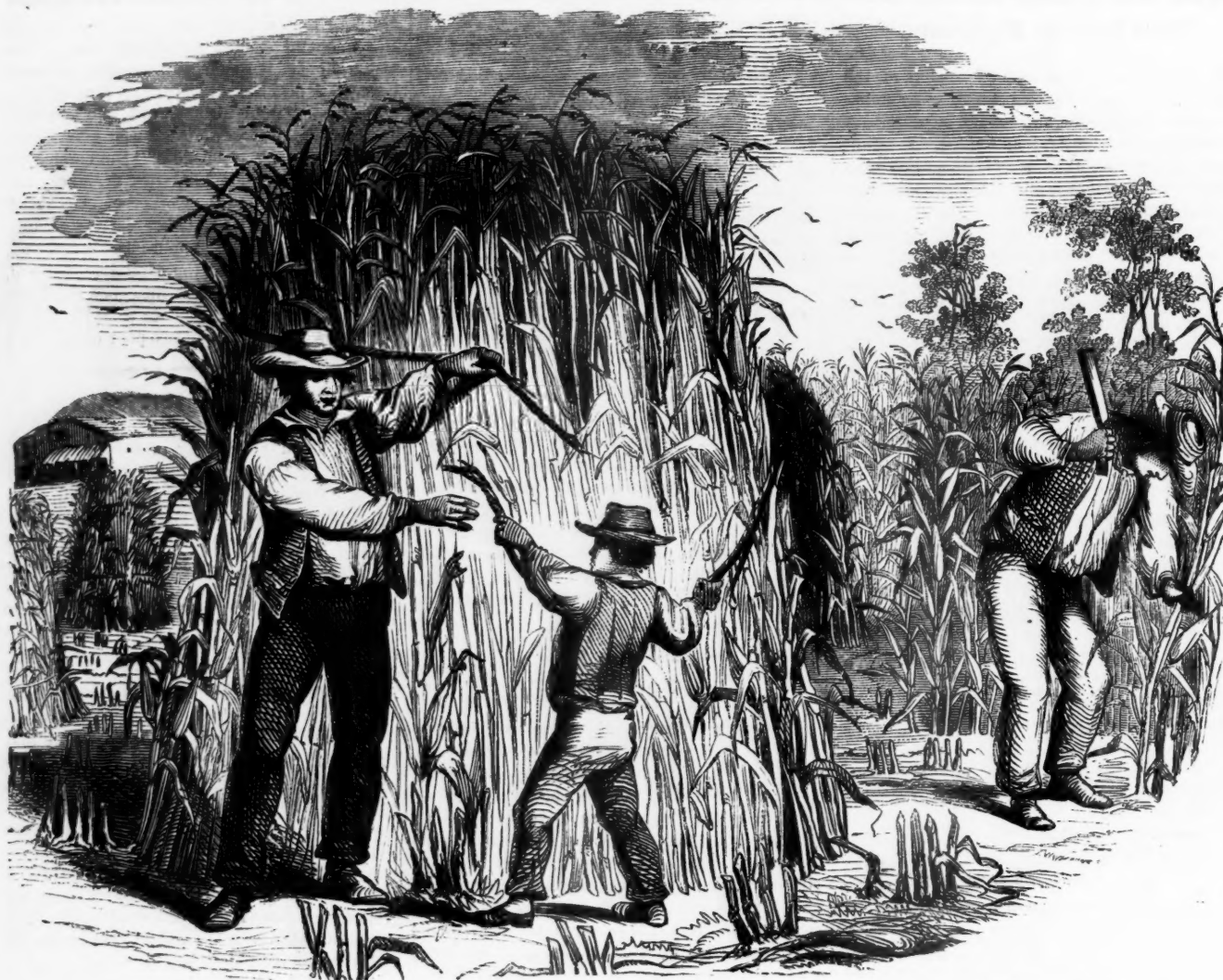
Moreover, clay is very retentive of all manures applied to it, while sand soon leaches them away. How often do we hear the owners of sandy farms complain in this wise: "Oh! it's just like putting water into a sieve!" Sandy soils are easier to work, but in the long run the clays are usually most productive. Some very interesting results have been achieved by dressing sandy soils with clay, the clay seeming to add positive fertility, as well as to increase its consistency. But in the question between clay and sandy land, probably all will agree that the best soil lies between the two extremes, a clayey loam being better for all ordinary purposes than either pure clay or pure sand. Z.

[There is no doubt that clay lands, if rightly treated, are the best, unless entirely made up of tough brick clay. Plants need a bed of fine

earth for their delicate roots to flourish in. A clay soil, well drained and deeply broken, furnishes this bed. Remove all surplus moisture by thorough drainage, then turn up the soil deeply for the action of air and frost, and you have just the kind of land that will bear good crops, and last forever. If devoid of sand enough to make it friable, a good mixture of muck, manure, sod turned under, or other vegetable matter, will help to ameliorate it. Were we hunting a farm to-day, we should chose a stiff soil, investing only a part of the capital in the soil, and using the rest to put it into good condition—for the same reason that we would buy one good machine rather than two poor ones.—Ed.]

Pedigree in Plants.

The general superiority of blooded animals, that is, those whose pedigree can be traced through families possessing marked and fixed points of excellence, is now generally conceded. It is acknowledged that an equal number of the Durhams, Devons, and Herefords, among cattle, of Merinoes, Southdowns, and Cotswolds, among sheep, etc., will, as a class, show superior qualities to the miscellaneous stock known as natives. But the same principle of superiority from breeding among plants, has not yet been as fully recognized. Yet there is abundant reason for supposing that the same law is equally prevalent in the vegetable as in the animal kingdom; that "like begets like," and that observance of this law may be turned to most profitable account by cultivators. To some extent this is acted upon, in saving the best seeds of grain and other products, but it is only recently that definite experiments have indicated how great improvement can be realized by proper and continued selection of seed. The experimental researches and success of Mr. F. F. Hallett, of Brighton, England, have already been noticed in the *Agriculturist*. New interest has been excited in this subject recently by a meeting of a large number of the leading farmers of England, to inspect his farm and witness the progress of his operations. From year to year this gentleman has selected, not only the best heads of wheat, but the best kernels of the finest ears, and used them for seed. One of the visitors says, "two or three features in the appearance of the wheat fields forcibly struck us, namely, the extraordinary strength of the stems which enabled them to withstand a very severe storm occurring July 21st, and maintain their upright position; the uniform size of the ear, and the absence of 'under-corn' (dwarfed wheat). We counted on one stool 42 ears, all of which were of the same size and as near as possible, of equal height." In reply to the question, "What was the average product of his wheat crop last year?" Mr. Hallett said he should keep far within the limits of truth in stating that the *maximum* was six quarters (48 bushels per acre), and the *minimum* four and-a-half quarters (36 bushels) per acre. He also gave three instances which had come to his knowledge, of large productiveness of the improved wheat, which yielded respectively, 72 bushels, 62 bushels, and 60 bushels per acre.—Now what has been done in England, can be repeated here. No one can fix the limits to which productiveness may be carried by following out similar experiments. May we not hope in a few years to find improved "breeds" of wheat, of corn, and other cereals in this country, as well marked, as are the established strains of horses and cattle?



AUTUMN SCENE—SECURING THE INDIAN CORN HARVEST.

The scene represented above is peculiarly American. Nowhere else does the maize plant add beauty to the landscape, and abundance to the resources of the Nation. In other lands, the failure of Wheat is followed by scarcity of food, and suffering among the poorer classes. In many sections of our own country, Indian corn is the principal dependence for human food, and in case of necessity it can be generally substituted for other cereals, as has been repeatedly done in sections where the wheat and rye crops have come short of the demand. It is the abundance of corn and its excellence as an article of food, that enables us yearly to export such immense quantities of other grain to foreign lands. To this staple, as much, if not more than to any other one production, is our national prosperity due. Without it as cheap food for their laborers, the cotton planters could never have made the production of their favorite crop a paying operation. If ever cotton was "King," maize was "Prime Minister," and has now worthily succeeded to the throne, even in the South. For beauty of appearance no cultivated plant may better claim such honor. Its stately form, clad in garments of fairest green, gracefully bearing aloft a jeweled scepter, and bedecked with golden crown, proclaims its royal prerogative. Nor is the simile altogether fanciful when its habits are regarded. It must live upon the fat of the land. The richest stores of the farm must be laid at its feet; from infancy to maturity

it will brook no neglect. But unlike too many sovereigns it makes grateful return for the homage it exacts from its dependents. The general crop during the present year, though not as large as has been gathered heretofore, from early and recent unfavorable weather, is yet a fair one—enough to supply the home demand, and leave a large surplus for export.

Much loss is experienced every year from neglect of the corn crop after it is ready for harvesting. As we have frequently said, cutting up by the ground is every way preferable for most sections. Care is required in curing the stalks. If the stooks are made too large, or carelessly put up, they may heat, or be soaked with rain, and mould, and much of the corn be spoiled. If the corn is to be husked directly from the stalk as standing in the field, it is desirable to have it completed as early as practicable; otherwise the birds, mice, and other depredators will take a large toll. We have seen the golden ears peering from a wreath of snow in Winter, having been left uncared for, except by vermin; such management, it need not be said, is not the most profitable farming. The first fruits of the crop should be gathered for seed, carefully selecting the best ears from the most prolific stalks. These should be carefully trussed together by braiding the husks, and hung where they will thoroughly dry before freezing; much seed corn is spoiled by neglect in this particular. After the corn is removed

from the ground, it is desirable that the remaining stumps be broken down before plowing for the following crop; otherwise they remain a vexatious impediment to cultivation. This can be done by drawing a roller or a rough stick of timber across the field when the ground is frozen.

How are you Marketing your Fruit?

Fruit can be knocked from the trees by shaking, by beating the limbs with long poles, and by other rough ways; it can be picked up in baskets and dumped into a wagon box, and taken to the nearest village and sold—at a very low price. By this treatment good fruit can be rendered nearly worthless, or at least fit only for immediate use, while the same fruit carefully picked and properly packed, would bring a price enough higher to amply repay all the extra care of preparation. We may say with truth, that a bruised apple is a spoiled apple. An apple which would last for months, will, after it gets a slight bruise in falling, soon decay and become worthless. The first thing to be attended to in marketing fruit, is the picking. Hand picking and careful handling—as careful as if the fruit were eggs—is absolutely necessary if we would get good fruit to market in good order. If the trees have been properly trained with low branches, most of the fruit may be reached by some kind of a self-supporting ladder, and there are several fruit-pickers which

may be advantageously used to reach those otherwise inaccessible. If the fruit is to be disposed of at the nearest market town, it will pay to use care in picking, but if it is to be consigned to a distant city, it is absolutely necessary to do so. During the first week or two after it is taken from the tree, fruit loses a considerable amount of moisture, or "sweats," as it is termed, and it is necessary that this process should be through with before packing. The "sweating" may be done upon a barn floor, or the fruit may be put in heaps in the orchard and covered with straw if there be danger of frost. Fruit should be kept at an even temperature, and as cool as possible without freezing. From the time that fruit is mature it constantly tends to decay, and that state in which we say the fruit is "in eating" is one step toward decay. The process can be made to go on slowly, or be retarded almost indefinitely, by keeping the fruit at a sufficiently low temperature. After the fruit has gone through the sweating process, it should be barrelled. It is better to make two grades of quality, separating the finest from those less large and fair. A few poor looking apples will injure the sale of a barrel of otherwise first class fruit. Never mix sorts, even if they closely resemble each other, and mark each barrel with the name of the fruit. It is of the greatest importance that the packing should be so done that the fruit will not shake about and bruise one another in carriage. The use of packing material is now generally abandoned, at least for apples, but the fruit is pressed into the barrel so strongly that shaking is prevented. The head may be pressed down by means of a lever, as shown on page 9 of the January *Agriculturist* for 1861. A convenient screw-press for the same purpose is sold at agricultural ware-houses.

Strawberries and Other Small Fruits at the West.

Mr. S. S. White, Mercer Co., Ill., sends to the *Am. Agriculturist* his experience with small fruits, which we give for the benefit of our western readers. He finds "Hovey's Seedling (well fertilized) worthless. Wilson's Albany suffered most from drouth. Burr's New Pine, and three other Pines are small, but the fruit sweet. Triomphe de Gand does not bear as well here as at the East, but the fruit is large, and the flavor very good. The Hudson, an old market berry, has been more prolific with me, and bears the drouth better than any other variety; the berry is firm and the flavor reasonably good. I shall discard all the varieties I have tried or seen tried in the West, except Triomphe de Gand, Wilson's Albany, Hudson, and Austin."

Mr. W. thinks that our directions for planting in narrow beds will not answer for the West, where land is plenty and labor scarce. He makes his plots of the dimensions of a quarter of an acre, manures well, and plows deeply. He then, by the aid of a line stretched across the plot, puts the plants out 12 to 15 inches apart in the rows, and sets the rows at three feet apart. "To dress the bed, use the cultivator early in the Spring twice, and two or three times after the vines have done fruiting. If no cultivator is at hand, use the small double-shovel corn plow. A man or boy will go over a quarter of an acre in an hour, and brush off with his hand the dirt from such plants as may get covered. Expense of work with cultivator \$2; hire of girl 6 days to clip runners \$3; pulling weeds in rows, the season \$1. Whole necessary expense of culture \$5. Yield of berries, 25 to 40 bush-

els on a quarter of an acre plot, according as the season is wet or dry." Mr. White advises his western friends not to be content with the strawberry alone, but to grow other small fruits. Houghton's Seedling Gooseberry, and the New Rochelle blackberry have done finely with him. The Hudson River Antwerp is the only good variety of Raspberry that will stand the winter in his locality without covering. Letters of the character of Mr. White's are always acceptable; though we may not publish them, they are of use in enabling us to judge what varieties are best adapted to particular States and localities.

Lead Labels for Fruit Trees.

A friend, who modestly wishes to be known as "Ignoramus," having read a note in the July *Agriculturist* upon the importance of looking to the tree labels, sends us a device which he uses, and one which may in many cases be worthy of being adopted. The engraving represents his fruit label. It is a strip cut from common sheet lead, half an



inch wide at one end, and gradually tapering to a point. Strips can be cut to this wedge form from a wide strip, without waste. Near the broad end a number, corresponding to that on a catalogue, is either stamped or cut with a knife. Just beyond the number a hole is made with a square punch or nail-set, and the small end of the label is put through this and bent over to fasten it. This appears to be a feasible plan, and one which will be found useful where there are a large number of trees to label. Should a label be thrown off by the expanding of a limb, or from other causes, being of lead, it will not be blown away and lost, as a wooden one might be.

A New Melon—The White Japanese.

This superior fruit was first introduced to the public by the enterprising horticulturist, Wm. S. Carpenter, Esq. We understand that the seed was brought to this country by some member of Com. Perry's Japan Expedition.



Fig. 1.—OUTSIDE OF MELON.

Though this variety has been known to a few cultivators for some years, it is to most people quite new. We have grown it for two years and are so well satisfied with it, that we are desirous that our readers should be on the look-out for it,

as the seed will soon be so generally distributed as to be readily attainable. Fig. 1, represents the general shape of the fruit, which is usually globular, though some times it is slightly oblong. The furrows are very shallow and the surface but sparingly netted. The color is one of its most remarkable characteristics, being nearly

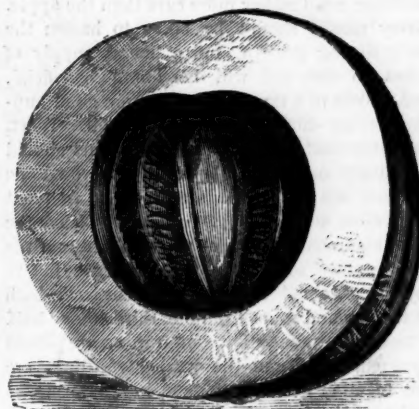


Fig. 2.—INSIDE OF MELON.

white, or at least, a greenish white. The flesh, which is very thick in proportion to the size of the melon, is greenish, tinged with orange. When well ripened, the whole flesh is eatable, the rind being scarcely thicker than the skin of an apple. The texture, sweetness, and flavor of the flesh are all that can be desired. We know that tastes differ with regard to melons, as they do with respect to other fruits, and can only say that this new variety pleases us. It is a prolific bearer, and we hope to see it introduced in place of many inferior kinds now cultivated.

How to Raise Seedling Tree Stocks.

H. K. Ackerman and others ask us to give some hints upon planting seeds for the purpose of raising nursery stocks. This is a matter which is generally left to the professional nurseryman, but there is no mystery about it, and any one who cultivates fruit can readily raise his own stocks. The soil for the seed-beds should be finely pulverized and well fertilized with old manure. The young seedlings need a tolerably rich soil to give them a good start and insure a vigorous growth the first season. Good clean and well-grown wood is essential to success, whether the stocks are budded or grafted. The seeds should be secured in the Fall. In this country it is customary to take the sound seeds of any variety, and for apples, the pomace left after making cider, is usually resorted to for obtaining seeds. In the family where much fruit is eaten, a quantity of seeds can be saved daily, if each one, after eating an apple, peach, or pear, will take the pains to preserve the seeds. A box or common flower-pot of sand should be kept standing in a convenient place, where each one can deposit the seeds from the fruit he eats. Where pomace is used, the seeds are separated by washing, collected, and dried, and then sown at once, or put into boxes with very slightly damped sand, and kept until Spring. If fruit is chosen expressly for the seeds, it is allowed to decay until the seeds can be readily separated. It is altogether best to sow in the Fall, if possible. If a large quantity is to be planted, it is best to make the drills about three feet apart, in order to allow the use of the cultivator, but if the bed be small, the rows may be at a convenient distance to work with a hoe. Having stretched a line

mark the row, open a trench with a hoe, about three inches deep, and distribute the seed as evenly as possible. Then cover with soil to the depth of three inches. A thin layer of old and well-decomposed manure spread over the rows will be of advantage. This is the usual way of planting apple and pear seeds. Pear stocks, however, need rather more care than the apple. Every means should be taken to hasten the early Spring growth, and a liberal supply of ashes to the soil will be found beneficial, and, unless in a limestone country, a good supply of lime should be given to the soil. When the seeds start in the Spring, the plants should be thinned out so that they will not crowd one another, and the growth promoted by frequent cultivation and weeding. In thinning, leave the most vigorous looking plants. In Autumn the seedlings are to be taken up, with care not to injure the roots. They are to be cut back, both at the top and roots, from one-third to one-half. Those large enough for root-grafting are placed by themselves, and the weaker seedlings are put together to be planted out in the Spring, to make another growth. Both sizes are to be preserved in slightly damp sand or earth in the cellar. During the Winter, the grafting may be done, and all be ready to put out in nursery rows as soon as the ground is fit to receive them. Cherry stones may be treated in the same way. Keep them in boxes of sand until Autumn, and then plant. In collecting peach pits for stocks, we cannot too often repeat the necessity of securing them from perfectly healthy trees. The pits may be kept in boxes, mixed with sand or earth, and exposed to the full influence of the frost; or if the quantity is large, they may be mixed with earth, and made into a mound well covered with soil, in a convenient place. When the germ shows signs of starting in the Spring, the seeds may be planted with a dibble in nursery rows. By the following Autumn the seedlings will usually be large enough for budding.

For the American Agriculturist.

Currants and How to Propagate Them.

Communicated by an Experienced Cultivator.

The Currant is one of those fruits which seem to thrive in spite of neglect, and to give tolerable crops in almost any soil and location. They will grow and produce some fruit if the bushes are allowed to have their own way and are choked with weeds. Let any one compare the fruit as ordinarily produced, with the fine specimens which have been shown on the tables at the American Agriculturist Office, and he will see that there is something to learn, even about currants. Any sort properly cultivated and pruned, will give far better fruit than it will if neglected, and there are new and fine sorts, requiring no more care than the old ones, which will produce fruit vastly superior. For red sorts, the Cherry and La Versailles, and for white, the White Grape and Provence, will give a good selection, though there are many others which have their advocates. The sorts in cultivation are generally of foreign origin, but some native species have lately been introduced from the far West, of which we have great hopes. For the present, however, we must be content with the European sorts. There is, perhaps, no plant more easily propagated than the currant. During the present month (October) select strong wood of last year's growth, and make cuttings of six inches to a foot long, cutting them off just below a bud, and square across. To pre-

pare the cuttings for planting, cut out every eye or bud except two or three from the upper end. Cuttings may be planted and grow without all this trouble, but if good tree-like plants are desired it is necessary to take some pains to procure them. Stretch a line across the bed where the cuttings are to be planted, and then take a spade, place its back against the line, force it into the ground nearly perpendicularly to the depth of about six inches, and throw out the soil, thus making a trench the shape of a letter V. Now set the cuttings about three inches apart, along in this trench, with their upper ends about even with the surface, as the soil will settle enough during the Winter to expose the upper buds. Throw a little soil into the trench, just enough to cover the lower part of the cuttings for one or two inches, and then with the handle of the spade, or the edge of a piece of board, crowd the soil down firmly around them. It is essential to success to bring the soil closely in contact with the freshly-cut portion, so as to exclude the air. If the cuttings are set in the latter part of September, or early in October, they will often become well rooted by Winter, and be prepared to make a vigorous growth in Spring; indeed they will do twice as well as cuttings put out in Spring. When cold weather comes on, the cuttings should have a covering of three or four inches of leaves or straw, not so much to keep out the frost, as to prevent them from being thrown out by frequent freezing and thawing. In the Spring the covering may be removed altogether, or it may be parted just over the cuttings, and left as a mulch. The soil for cuttings should be well worked; only old, fine manure be used, and a dry situation should be selected for the bed.

Healthfulness of Currants.

Mrs. W. Hauff, Richmond Co., N. Y., in a communication to the *American Agriculturist* says: "Whenever I see the abundant planting of currants recommended by you, I feel as if I must tell you that I have found this excellent fruit a sure preventive of dyspepsia. For three summers past I have made my breakfast of them as long as they were to be had, and eaten them frequently during the day besides. I find that a plateful of currants eaten with sugar in the morning, disposes of all the bad accumulations in the stomach, without giving diarrhoea, and helps to strengthen the digestive power through the wholesome acid this fruit contains, in which it is superior to the strawberry, raspberry, etc., for I have tried each in its turn. I can digest, without trouble, a hearty dinner after I have had a breakfast of currants, while at times my stomach has been so weak, that a cup full of broth or soup only, would give me pain as if a cancer was gnawing within me."—[This accords with the experience of many others, but in the treatment of dyspepsia, or any other disease, it should be borne in mind that "what is one man's meat, is another's poison." Each must experiment and determine for himself what is suited to his particular case. In general, however, it may be safely asserted that a more liberal use of this and other fruits during Summer, in place of meat, would greatly diminish dyspepsia and other ailments of the digestive organs.—It is to be remembered, however, that when currants are eaten, every berry is to be broken, before it is swallowed; the gastric juice of the stomach can not act upon the unbroken skin, and whole currants produce irritation through the whole alimentary canal, often caus-

ing colic and diarrhoea. Children and persons having defective teeth, too often swallow them unmasticated, and suffer therefore.—Ed.]

Renovation of Fruit Trees.

Mr. Wm. H. Morgan, of Harford Co., Md., writes to the *Agriculturist*: "I had a fine large apple tree which was very thrifty, but did not bear in the Spring. I dug a ditch just under the outer ends of the limbs, cutting off all the ends of the roots; and some months before the leaves of the other trees faded, this tree's leaves turned yellow. That Fall I manured the ground heavily, and in the following Spring strewed a peck of bone-dust over it, and plowed it in, and then put on a half bushel of ashes. This season the tree looks very flourishing, and has half a crop of apples upon it, while before it scarcely ever yielded a dozen, and they were small and knotty. Others of my trees which I treated in like manner, except cutting off the roots, have borne full this season."

Manuring Fruit Trees Injurious.

An indignant subscriber writes us that, in accordance with the advice of this paper, he dressed his young fruit-trees last Fall with horse manure, forking in the same the following Spring, but that his trees were injured by it. They did not put forth leaves until June, and then only after he removed the manure, headed them back severely, washed the trunks, soaked the ground, etc.

Did we ever advise to apply "horse-dung," and that in a fresh or decomposed state, as we learn yours was? Well-rotted manure, cow and horse dung together, composted with muck or soda, would be nearer to our doctrine. We have often said, and now repeat it, that perhaps the safest and best fertilizer for young trees, both fruit and ornamental, is swamp muck composted with lime at the rate of two bushels to the cord evenly distributed through it, or of ashes at the rate of about six bushels. This should lie in a heap several months, and be forked and shoveled well together several times. And when used, it will do no such harm as did our friend's hot horse dung. It will keep the soil healthfully moist in Summer, porous and sweet at all times, and will furnish vegetable food for the roots in a gradual way, just as they need it. A little old dung mixed with it will do no harm. And when applying it, let it be spread over the entire surface of the roots, not in a heap close to the trunk of the tree.

What Early Apples to Plant.

Several letters have been sent to the *Agriculturist* office asking advice as to early varieties of apples, but no letter has stated whether they were to be grown for market or for home consumption. Those who prefer a moderate quantity of choice fruit for their own use, would require a different selection from those who wished to get the most for their fruit in the market. As the best summer kinds we name: Primate, Gravenstein, Early Joe, Red Astrachan, Summer Queen, and Yellow Sweet Bough; the last three being best adapted for marketing. The Primate is an apple which will give general satisfaction and is in some places cultivated as the Early Bough, and Early Harvest, to both of which it is greatly superior. Gravenstein is a remarkably high flavored fruit, and the Early Joe is probably the best of all early apples. It

is small, but for quality we have not seen it surpassed. The Red Astrachan and Summer Queen are both showy apples, of fair quality, and their appearance causes them to bring a good price. We are the better pleased with the Summer Queen, the more we see of it. The tree is of fine shape, a good grower, and the fruit, though not of the very first class, is very fair and beautiful. A friend of ours says, that it is the most profitable fruit he raises, and all who grow it, speak well of it in this respect. We are glad to see those who live near market towns turning their attention to the best varieties of early apples; it is quite certain that they will find their account in it. The above list comprises the best sorts we know of at present.

Trials of Life in the Country.—A Hint to Visitors from the City.

To the Editor of the American Agriculturist:

I am one of those who have left the city to try farming on a small scale, in the country. My wife is an industrious and frugal housekeeper, and by our combined management, we have paid for our land and have begun to lay up a little against a rainy day. We have built a pleasant cottage, and the trees and flowering plants around it, arranged and set out by our own hands, begin to afford us much satisfaction. Our pears, grapes, apples, and other fruits, are just coming into bearing. Our children helped us plant and cultivate them, and they feel a just pride in the work of their hands. Much as they love to pluck flowers and to eat fruit, they never pick them in wanton wastefulness, but they are in fact as careful of them as are their parents.

But here begins the story of our sorrows. Coming, as we did, from the city, we have frequent visitors from town. They are wont to come in fruit time, and that in flocks. They seem to scent the strawberries and grapes fifty miles off. And when they come, they do not always wait to receive what our limited resources can afford to give, but they help themselves to whatever they can find. Last week, a family, consisting of the mother and six children and a maiden aunt, came, and the way they took to my garden and fruit-orchard was "a caution." While wife and I were busy, they rambled about, as if perfectly at home. My Delaware and Rebecca grape vines were just beginning to favor us with a few clusters. On each, were a few bunches which I had reserved, expecting to exhibit them at the next County Fair. Our visitors picked enough from these to destroy their symmetry and beauty, and of other clusters they ate freely. Then they passed through my young pear trees, tasting right and left, throwing away the half ripe, and devouring or pocketing the others. Most of these trees were now fruiting for the first time, and, after waiting many years for them, I had hoped to enjoy the first taste myself, and to have the pleasure of giving away to appreciating friends what my family did not need. But here they were virtually snatched from my very teeth!

I might go on further with the story of our annoyances and trials, but the foregoing is, perhaps, enough to show you the nature of our troubles. We do not complain so much of the money value of our losses, as of the vexation and disappointment at seeing fruit coolly plucked, after long waiting, and so much labor and care. Some city people—surely not all, or the country would be devastated—but some seem to think that fruit grows spontaneously in the country, and that the supply is unlimited, and

is common property. And the sufferer must not complain to his visitors, lest they call him stingy, but must spread for them a bountiful table, and be good natured and smilingly agreeable. Mr. Editor, you see my sore spot: pardon my wincing, and won't you use your influence through the *Agriculturist*, to cultivate a better public sentiment.

A SUFFERER.

["Sufferer" is unfortunate in the character of his visitors, though instances as bad as that he relates do sometimes occur. City people are supposed to be well-bred, and generally are, and we country people all like to have them escape the prison-dwellings of the city, and come and see and enjoy our country homes. Aside from the pleasure their society generally gives, we feel a little self-complacency, in doing a sort of benevolent deed, when we take them through our grounds, and share with them some of the good things from our gardens and fruit yards—though, like "Sufferer," we prefer to have them let us do the gathering, and proffer the fruits. Of course, none but those who need the admonition, will take any offense at the hints of our correspondent.—Ed.]

The Quality of Grapes.

There is perhaps no fruit about which there is such a diversity of opinion and about which tastes differ so much as the grape. Nothing shows more strikingly the difference between a crude and a cultivated taste, than to hear the opinions expressed by the numerous individuals who subject grapes to our inspection. One person will bring us a parcel of grapes which he says are remarkable for their perfume, but before he opens the package we recognize the "perfume" as the foxy odor so disagreeable to an educated palate. We have heard a person declare that he never saw such grapes as grew on his father's farm. "Why a dish of them would fill the whole house with fragrance." This person probably never tasted a good grape, and would be perfectly satisfied with a fruit like the Charter Oak. Those who have based their standard of quality upon this peculiarity of our worst grapes, we have very little hope of. It is a peculiar taste, and argues a defective sense. Others show a more cultivated taste in selecting some of the thin skinned and least musky of the wild grapes, but their knowledge extends only to the fact that there are wild and cultivated grapes, and that the cultivated ones are generally the best. To properly judge of grapes, or any other fruit, it requires not only a refined but a cultivated taste. It needs a naturally delicate palate to distinguish flavors, and this must be educated by experience. A good grape should have a very thin skin, be quite destitute of foxy aroma, and with so delicate a pulp that the seeds can be separated by the tongue; after these prime requisites the qualities of sweetness and flavor are to be considered. We think that the Delaware may be taken as our present standard of a good grape, though with the attention now given to producing new varieties, we look for a fruit which shall be even superior to this variety. We are led to these remarks by receiving several "new seedlings" sent in to us with the regret that they were too early for our great Grape Exhibition. They were sent by persons whose taste for grapes had not been cultivated. Had they been exhibited, the senders would have been disappointed in not getting a prize, and would have been quite surprised to learn that their fruit was condemned as unworthy of cultivation.

My Asparagus Bed.

To the Editor of the American Agriculturist.

My Asparagus bed was set out Oct. 20th, with two-year-old roots, and has pleased me so well that I must tell others how it was done. Perhaps old boots, shoes, leather shavings, bones, horns, stones and other things recommended as needful might have benefitted it, though it apparently lacks for nothing, and a person who cannot get these articles should not be deterred from planting this early and always welcome vegetable. The way I did it was this: On a dry, sandy spot in my garden, I staked off a piece 15x18 feet, manured the surface heavily, and spaded two spits deep, working in another good dressing with the lower spit. The soil was rich to begin with. I set the roots in rows, eighteen inches apart, and nine inches in the row, which gave me 12 rows 15 feet long, each containing 20 roots. The crowns, when covered, were three inches below the surface, and the whole was raked off smooth. Just before Winter set in, I covered the bed with two or three inches of coarse stable manure, the finer portions of which were forked in lightly between the rows in the Spring. Weeds were kept down and the soil frequently stirred. The plants made a fine growth the following season. Since then I have followed the same method as to manuring and keeping the bed clean of weeds, and I have cut more real giant asparagus, each Spring, than could be eaten by a family of eight persons.

GARDENER.

Brooklyn, N. Y., Sept. 15th, 1863.

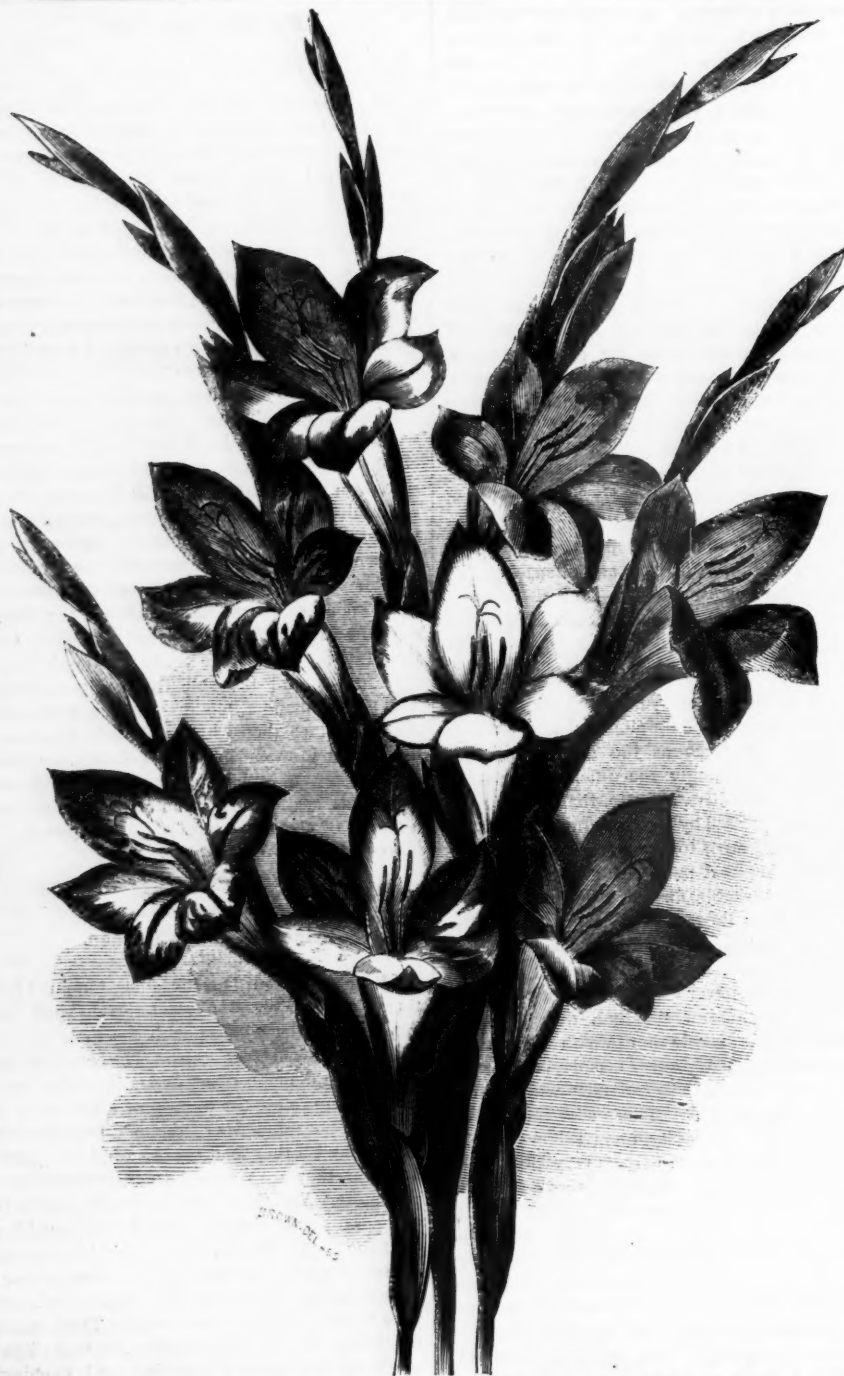
For the American Agriculturist.

Crinoline in the Garden.

I have great regard for the ladies, but must tell them that their broad phylacteries do spoil our gardens. Paths wide enough for their amplitude can not well be afforded. The consequence is that if a delicate plant or trailing vine happens to stand near the margin of a border, it is sure to be crumpled or broken down by their hoops; and if they lean over to admire or pluck a flower, they are very apt to crush down several more. And then, what havoc they make in the green-house—bruising plants and knocking over the pots! How many an amiable gardeners scowls when a row of hoops come to his door!

Dear ladies, what shall be done? Can't you take in sails, say about one half? Think about it. Some of our lady friends love to do light work in the garden, morning and evening, but what sad work the dewy plants and the wet ground make with their trailing skirts! "Bloomer" dresses we do not approve of for the parlor, or even the street, or church, but in the garden and kitchen, why may not something of the sort be wisely adopted? The ladies are full of ingenious contrivances, and it would seem that they could devise some sort of compromise between the sweeping folds of the parlor dress and the genuine Bloomer costume. Why should not our fashion-mongers contrive a working dress for ladies, neat, modest, tasteful, and becoming? GARDENER.

APPLES keep best when left upon the trees until quite late in the season. A white frost, and even a slight freezing will not injure them. Pick carefully, and leave them in the orchard or out-house to sweat for a few days, and only take to a cool dry cellar when there is danger of their being injured by hard frost.



SPECIMENS OF GLADIOLUS FROM OUR EXHIBITION TABLES.

Sketched and Engraved for the American Agriculturist.

The Improved French Hybrid Gladiolus.

Some years ago two or more sorts of Sword Lily or Corn-Flag were grown in the gardens, but they did not excite any great admiration. Within a few years the *Gladiolus Gandavensis* and its varieties have been introduced, and have become deservedly popular. Their great beauty, variety of color, and ease of cultivation make them among the most valuable plants for garden decoration. The engraving represents a group of flowers selected from a most magnificent collection exhibited at the *Agriculturist* office by Mr. Andrew Bridgeman, of New-York. The *G. Gandavensis*, is so called because it originated in Gand (Ghent), and it is claimed that it is a hybrid between two old species; however this may be, it sports wonderfully and has produced a great variety of most beautiful sorts,

differing in the size of flower, color and markings. Some are pure white with most delicate purple lines; others unite white, yellow and purple, scarlet or crimson, shaded in the most pleasing manner. The named varieties number several hundreds, and sell at the stores from 30 cts. to \$2 a bulb, according to their rarity. The plants will grow in any good soil; the colors come better if the ground is not made too rich. The bulbs may be planted as soon as the frost is well out of the ground. The best effects are produced by planting strongly contrasted colors in groups of three to five. When a flower stem appears, it needs to be tied to a neat light stake to keep it from being blown over by the winds. When the frost cuts down the foliage, the bulbs are to be taken up and placed in a sheltered place to ripen, and then put up in paper bags until the time for Spring planting.

The bulb planted in the Spring, will usually be found to have multiplied to two or three; and frequently numerous small bulbs, not larger than peas, are found attached. In case of a choice variety, these minute bulbs should be carefully saved and planted, as they will in a couple of years also become good flowering bulbs.

The following is a list of select varieties of *Gladiolus*. It does not by any means comprise all the fine sorts, but these kinds are good and will give satisfaction: Adonis, Archimede, Brenchleyensis, Calypso, Comte de Morny, Couranti fulgens, Daphne, Don Juan, Edith, Eugene Verdier, Junon, Louis Van Houtte, Mathilde de Landevoisin, Mazeppa, Napoleon III., Neptune, Osiris, Premices de Mont Rouge, Vesta.

The Rose as a Bedding Plant.

Of upright roses we have often spoken, and shall again speak, for this is their true position. But for variety and novelty, it may frequently be recommended to use them as bedding plants, pegging them to the surface of the ground. To do this well, a bed of deep, rich soil should be prepared. The work should be done with special thoroughness at the outset, because the earth can not be enriched and spaded afterward, as well as with standing roses. Set the plants $1\frac{1}{2}$ to 2 feet apart each way, according to their habit of growth, using only young plants. Peg down the branches to the earth, from the very start, and spread them equally on every side, like verbenas, so as to cover the ground.

Of the kinds most suitable for this treatment, we would name for the latitude of this city and southward: Deconiensis (Tea), Agrippina (China), Mrs. Bosanquet and Malmaison (Bourbons;) for northward of this, we would propose: Hermosa (Bourbon), Giant of Battles, Mad. Laffay, and Duc d'Aumale (hybrid perpetuals). Cover these beds with coarse litter in the Fall, uncover by middle of April, and prune out the oldest wood and peg all down in good order. The effect of such a bed is very pleasing.

About Crosses and Hybrids.

W. K. R., of Hastings, N. Y., asks us to discuss this subject in the *Agriculturist*. We can only briefly answer some of his questions without going at length into a matter which is involved in much obscurity, and one which treated at any length would concern but a small minority of our readers. Those interested in the subject will find some very pleasant reading in the 8th chapter of Darwin on the Origin of Species. The term *hybrid* is used very loosely by gardeners and florists. By the best authors it is applied only to the product of one species fertilized by another distinct species. Hybrids are rarely fertile, though they may be fertilized by the pollen of one of the parents, and then the progeny tends to revert to the original character of the parents. Hybrids take place in nature, though rarely, and are produced to some extent by the care of the cultivator. The product of the union of two varieties of the same species is properly called a *cross*, or cross breed; it takes place with the greatest facility, and requires much care to prevent the loss in this way of desirable sorts of cultivated plants. We know of no instance where the crossing extends from genus to genus. We shall look with much interest for the result of Mr. R's. experiment in impregnating the Tomato with the pollen of the Red Pepper. Should a hybrid be obtained, it will go to show that the Tomato was improp-

erly separated from the genus *Solanum*. We know of no instance in which the character of the immediate fruit is affected by a cross fertilization, the influence being confined to the seed, and showing its effects in the next generation, from the seed. We do not assert that this is a settled point; we have had statements to the contrary, but have seen no proof. It is an interesting subject for experiment and observation.

THE HOUSEHOLD.

"Bitters"—Worse than a Humbug.

The land is full of bitterness. We speak not now of the woe and anguish caused by war, but of what promises to be scarcely less disastrous in its results upon individuals and families. During the present year we have traveled four or five thousand miles, through different parts of the country. In all that route there has hardly been a point where the eye did not meet an advertisement of somebody's "Bitters." Upon every available space, on the walls of buildings, on the fences, on the surface of rocks and stones, upon the bridges and telegraph poles, indeed every where "Bitters,"—"Strengthening Bitters," "Healing Bitters," "Invigorating Bitters," "Life Saving Bitters," or some other "Bitters"—stare one in the face. This is most strikingly the case in some portions of Illinois. So, too, the newspapers abound in advertisements of these various bitters; and in every hotel, tavern, and down to the smallest 3 by 4 drinking shop, attractive rows of bottles labeled "Bitters" are every where to be seen. We know of large glass manufacturing run almost exclusively in the manufacture of bottles for Bitters.—Now all this costs a "mint of money," and this money has already come and is coming from those who buy and drink those Bitters—showing an immense consumption.

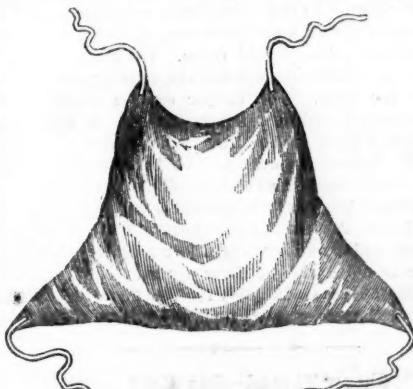
But what are these "Bitters"?—With scarcely an exception, they are essentially a cheap form of alcohol—whiskey, gin, or rum. Most contain a little bitter extract—some more, some less—added as a blind, or as a slight tonic. Take out the alcohol, and all that remains would not amount to much—good or bad. Whiskey, or gin, that under its own proper name would not sell for fifty cents a gallon, is put into bottles costing 4 to 7 cents each, five to eight bottles to the gallon, labeled at the cost of a penny, and sold at a dollar a bottle, or at least five dollars a gallon. The attractive label, the great stories told of the healing and strengthening properties, lead people to pay these prices. This much is sheer humbug.—But there is a worse feature. We stopped at the house of a western farmer who would not for the world incite in his children a taste for and love of alcoholic drinks. Yet influenced by the advertisement in his family paper, and a religious one at that, he had bought and used several bottles of these bitters, and supposing us to be wearied with a long day's travel, he proffered us a glass of "strengthening bitters." Two of his little boys were given a spoonful each before breakfast—"to keep off the chills." We told him he was feeding them with gin, and laying the foundation for a drunkard's life and a drunkard's grave.

We constantly meet with persons who daily use these "bitters." The temporary stimulant afforded by the alcohol, deceives them into the belief that they are "invigorating," or "strengthening." When the excitement subsides, and the natural reaction and lassitude follow, they take another dose, and so go on. We say in all seriousness, that the enormous sale and use of these "bitters" is doing more to produce wide-spread dissipation and drunkenness, by begetting a taste for alcohol, than can be counteracted by the efforts of all the Temperance Societies that have yet been organized. Let us beg of every man who would not bring up his family to be drunkards, and who would keep out of temptation himself, to banish these "bitters" of every kind from his house, and discourage their sale in the community. We have had column after column

of advertisements of them offered for the *Agriculturist*, but we would as soon admit advertisements of sugar pellets which we knew to contain concealed arsenic or strychnine.

A Lung Protector.

A very absurd fashion requires men, while wearing four to eight thicknesses of cloth around most of the upper part of the body, to leave an open place in front of the lungs for the display of their white linen bosoms, and gold studs—if they have them. This front of the neck and upper chest is the very part that should be most carefully guarded from changes of temperature, for the lungs lie just back of and under the collar bone. As we can not compel the correction of the fashions, by anything we may say in the unfashionable *American Agriculturist*, let us give our antidote, one which has to our certain knowledge proved efficacious in several instances.—There is a species of soft leather, sometimes real "Chamois" skin, but usually a sheep-skin imitation, which is sold almost every where for 25 to 50 cents per skin. The imitation answers as well as the real Chamois (pronounced shammy).



FORM OF THE PROTECTOR.

From the smaller end of the skin, cut off a piece like the engraving above. The rest of the skin may be used for cleaning carriages, windows, silver, etc. Put strings on each corner, to fasten it around the neck and waist. This kind of leather is so open that one can blow a light out through it, and on this account it is valuable to shut out cold, and at the same time not retain perspiration. It can be washed when soiled, the same as flannel, except that the suds and rinsing water should not be quite so hot as for flannel.

For a Sore Throat.

The best remedy we have found for a sore throat, is, on retiring to rest, to rub on the outside a little "Volatile Lintment," and swallow slowly a few drops of paregoric, letting it dissolve in the saliva, and spread along down the inflamed parts. The Lintment is generally sufficient alone. Volatile Lintment is simply a mixture of sweet oil and aqua ammonia (called liquid hartshorn). These are put in a vial and shaken, using such proportion as to form a semi-liquid soap. An ounce or two can be got cheaply at the druggist's, and if tightly corked, it will keep for months. Rub it on with the fingers. We find nothing better than this for soreness of the chest or joints, or for lameness, stiff neck, etc.

To Stop Coughing.

Slight irritation of the throat may be relieved by sipping a little thick slippery elm tea, or by sucking a piece of gum arabic. These articles coat over the mucous membrane, and prevent the irritation of the air. A very few drops of paregoric held in the mouth, and allowed to trickle down the throat, will allay coughing. The best cough medicine for children, one which we have used for several years with entire satisfaction is the following:

Mix in a vial equal parts of *paregoric*, *castor oil*, and *syrup of ipecac*. Always shake well just before using. A few drops of this swallowed, but not washed down by water or other fluid, will almost always soothe a cough. Repeat the dose as often as the coughing returns. From one-fourth to one-half a teaspoonful, or even a whole teaspoonful may be given when a lesser quantity does not suffice. A large dose after a full meal may produce a little nausea. Children subject to coughs should eat very light suppers, and indeed all children should eat much less, and simpler food, at night than at morning or noon. The above mixture may be kept on hand ready prepared, as it does not deteriorate if kept corked. It may interest those afraid of mineral medicines (though they partake freely of common salt which is a mineral) to know that the ingredients are all "vegetable."

Soda and Mineral Waters.

If properly prepared, "soda water" is a refreshing and harmless drink. Though it contains no soda, it is called "soda water" because soda was formerly used in its preparation; as made at present, it is simply a solution of carbonic acid in water. Carbonic acid is a gas which is very soluble in water: it is the ingredient which gives the effervescence or sparkling quality to bottled cider, ale, beer, etc., and is very strikingly perceptible when a little saleratus or cooking soda is dropped into vinegar. It is seen bubbling up from the liquid, and making it to froth and foam. Under ordinary circumstances, water absorbs its own bulk of this gas; it is present, to a greater or less extent, in all drinking water, and it is its absence which gives water that has been boiled so flat a taste. Under pressure, water will absorb a much larger quantity of carbonic acid, and by means of a force-pump, the gas may be forced into water in a strong closed vessel, and it is thus made to dissolve many times its own bulk of the gas. This is the way in which soda water is made. The fountain, a strong vessel of iron or of copper lined with tin, contains pure water, and the gas is driven in by means of a force-pump, until 15 or more times its bulk of gas has been absorbed by the water. When an outlet is afforded by opening the stop-cock of the fountain, the elastic gas forces the water out, and its escape, from its solution in water under pressure, causes the foaming which we see in a glass of soda water. When taken into the stomach, carbonic acid is not only a pleasant tonic, in health, but very useful in some forms of disease, and we often have prescribed in fevers, soda powders, which are made of carbonate of soda and tartaric acid, and produce soda water in an extemporaneous way.

"Mineral waters" are those natural waters which contain so much mineral matter in solution as to affect the taste, and impart a medicinal quality.



PORTABLE GLASS SODA FOUNTAIN.

These waters hold in solution various salts, iron, sulphur, etc., and various springs of water of this character have a high reputation. In our own country, the Saratoga and several other noted springs are places of great resort for invalids; and in Europe there are certain springs of even greater reputation. It is probable that the good effects of these waters are in great measure counteracted by the miserable hotel life which is followed at such places. All the celebrated waters have been accurately analyzed, and chemical skill has succeeded in making them artificially, and in reproducing exactly similar water to that furnished by the celebrated medicinal springs. Now, one can drink

the waters without the annoyance of travel or the discomfort of a watering place hotel, but surrounded by the conveniences of his own home. One of the most successful manufacturers of such artificial waters is Mr. Carl Shultz, of the firm of Shultz & Warker, of this City. Mr. Shultz has brought his well-known chemical knowledge to the production of an article of general utility. The waters are put up in strong glass fountains, the soda fountain in miniature, and the plain carbonic acid (or soda) water, or the various mineral waters, can be drawn in the room of the patient, in all perfection and purity. As usually drawn from tinned copper fountains, there is a danger of metallic impregnation, as the tin used for this purpose is most generally adulterated with lead. In the apparatus used by Messrs. S. & W., there is no possibility that such an impurity can occur. The water is liberated from the fountain by touching a spring with the finger, and may be drawn in any quantity desired. We present an engraving of one of these fountains, which are really neat, convenient affairs. They are sent around to families ready filled, and the bottles are called for when empty, or exchanged for others. The low price (10 to 15 cents per quart fountain,) at which soda and several kinds of mineral waters are delivered, is an important consideration, and they are worthy the attention of physicians and others having occasion to use them.

For the American Agriculturist.

Water, Hard and Soft.

The medicinal effects of water are not enough considered. Every one knows that there is some friction in the kitchen when hard water has to be employed for washing, but there is as much friction in the human frame when it is used constantly for drinking. Medical men, from Hippocrates to this day, testify that the habitual use of hard water tends to constipate the bowels. The water for domestic use in Liverpool, is quite hard, and a large proportion of the inhabitants suffer from visceral obstructions, a malady which generally abates, when the sufferers leave the city and go where soft water is at command. In the best hydropathic establishments of Europe and this country, the aim of the physicians is, to get the "softest and purest water." At the famous Malvern Institution, where thousands of invalids resort annually to drink the healing springs, "the spring water in the highest repute for medicinal quality, is a water only remarkable for its purity."

Who does not know that horses have an instinctive love of soft water, and refuse that from wells, if they can have access to running streams. It is the tendency of such water to produce a rough coat on horses, as well as to disturb their digestion. In England, where great pains are taken with race horses, soft water is often carried for miles to the race-course, lest the horses should suffer from hard water furnished on the ground. Youatt says: "Instinct or experience has made the horse conscious of this (the difference in water,) for he will never drink hard water if he has access to soft; he will leave the most transparent water of the well for a river, although the water may be turbid, and even for the muddiest pool." The same thing is true, more or less, with sheep and other stock.

From this, it is plainly of much importance to provide wholesome water for our families and for our domestic animals. For home use, where children and others suffer from the water in common use, a filtering cistern, or one of the various filters in market becomes an indispensable article. M.

[Pure water is desirable, but spring water may be as impure as that from wells. All water passing through the soil, dissolves out soluble minerals or salts. For this reason the water of running streams is mineralized. The ordinary filter will not remove these dissolved substances: it merely takes out the coarser materials. Rain-water is the only pure liquid to be depended upon. If caught from high, clean roofs, and kept in clean cisterns, filtering is unnecessary. The peculiar taste is owing to the absence of flavoring earthy salts. After

a little practice, rain water is relished better than any well or spring water. We have not used anything but cloud-distilled water for years, and now well water has a disagreeable mineral taste.—Ed.]

Water-Proof Walks.

A method of making hard dry walks is coming into use in some parts of England, which in certain circumstances must be excellent. A hard dry bottom being prepared, it is coated with about two inches of hydraulic mortar, made by mixing together about six measures of clean gravel, three measures of sharp sand, and one measure of good hydraulic lime—usually called water-lime. The best hydraulic lime in England is called Portland Cement. Probably a larger proportion of our common hydraulic lime would be required. Those who have not access to sea-shore gravel, can usually get that which will answer, by sifting over any soil which contains pebbles and gravel. This will be improved by washing it, which can be readily done by putting a bushel or so in a barrel, and fill with water, stir it well, and pour off the water rapidly. The washing may be repeated two or three times if necessary. As the mixture sets quickly, only a few bushels should be wet at a time, and this be applied at once and smoothed down. The surface should be raised in the middle, and slope gently and evenly to the sides. The mortar can be applied and smoothed with a common shovel. It will thus form a hard surface from which water will flow off. Unless the walk bed be hard, or thoroughly under-drained, so as to be dry to the depth of 12 or 15 inches, it will heave and crack by freezing in winter. A walk like the above will not be expensive, and if well made will last a century, and not be troubled with weeds or worms. The same bedding answers admirably for the floors of cellars, green-houses, poultry houses, etc.

"Cheap Thread—One Cent a Spool!"

On our way home from the *Agriculturist* Office last night, we saw a poor laboring woman exhibiting to her friend a lot of spool thread, which she had "bought very cheap of a 'street merchant'—only one cent a spool." This morning we visited several of the "street merchants" who have displayed upon the sidewalks, and at the street corners, large heaps, a bushel or more each, of this cheap thread, and we bought a few samples to examine. Though appearing to be full spools of good thread, on measuring the length, the average amount on a spool is only $11\frac{1}{4}$ yards! At this rate "200" yards would cost about 18 cents. The best spool cotton thread is retailed now at 8 to 10 cents, the spools warranted to contain, and they generally do contain, 200 yards. But the worst thing about this "cheap thread" is, that it has no strength. The poor women will find, after spending hours and days in using it, that the stitches will break very readily, and before an ordinary garment is worn out, almost as much good thread will be needed for mending, as would have sufficed to make up the garment at first. The truth is, poor thread is very dear, even if it be given to a person. The very best is cheapest, at any price. We allude to this matter now, because that, owing to the present higher price of thread, hundreds of thousands of spools of poor stuff are being worked into the market—often mixed with better sorts.

Sealing Fruit Bottles.

Mrs. C. H. M. Newell, Hampden Co., Mass., writes to the *Agriculturist*: "Among your many plans for securing jars of fruit, I find no mention of one that I have used several years, and find it preferable to any kind of patent fastening, and even better than the patty-pan arrangement. Cut circular pieces of thick, stout cloth, sufficiently large to tie over the jar or can. On these, cover with cement a space that will fit the opening, and

extend over the rim. While filling the jars, lay the cemented covers on the bottom of the stove oven, to soften. When the jar is ready, wipe the rim dry, and apply the covers, cement side down, smoothing out the wrinkles and tying it with a strong string. Afterward cover the top with some of the cement thinly spread. A few minutes will show, by the depression of the cover, that the contents are secure. I think you will find it the cheapest, easiest, and most expeditious manner of sealing that has come to your notice. Very many use it, and all give it their unqualified approval. The cement I use is made with 1 oz. rosin, 1 oz. gum shellac, 1 cubic inch of bees wax: melt these in a tin cup, and mix thoroughly; use gentle heat to melt or remelt, as great heat may granulate the shellac."

Don't Rock the Baby.

If all the ultimate consequences of one's acts are to be laid to his charge, the man who invented rocking cradles for children, rests under a fearful load of responsibility. The down-right murder of tens of thousands of infants, and the weakened brains of hundreds of thousands of adults, are undoubted results of his invention. To rock a child in a cradle, or to swing him in a crib, amounts to just this: *the rapid motion disturbs the natural flow of the blood, and produces stupor or drowsiness.* Can any body suppose for a moment that such an operation is a healthful one? Every one knows the dizzy and often sickening effect of moving rapidly in a swing; yet wherein does this differ from the motion a child receives when rocked in a cradle? It is equivalent to lying in a ship berth during a violent storm, and that sickens nine people out of ten. A very gentle, slow motion may sometimes be soothing, though always of doubtful expediency, but to move a cradle as rapidly as the swing of a pendulum three feet long, that is once in a second, is positive cruelty. We always feel like grasping and staying the arm of the mother or nurse who, to secure quietude, swings the cradle or crib with a rapidity equal to that of a pendulum a foot long. If any mother is disposed to laugh at our suggestions or consider them whimsical, we beg of her to have a bed or cot hung on cords, then lie down in it herself, and have some one swing it with the same rapidity that she allows the cradle to be rocked. What she will experience in both head and stomach, is just what the infant experiences.—

We insist that this rocking of children is a useless habit. If not accustomed to rocking, they will go to sleep quite as well when lying quietly, as when shaken in a cradle. If they do not, there is trouble from sickness, or hunger, or more likely from an over-loaded stomach; and though the rocking may produce a temporary stupor, the trouble is made worse thereafter, by the unnatural means taken to produce quiet for the time being.

Curing Pork Without Brine.

A subscriber, W. C., of Carbon Co., Pa., sends to his co-readers of the *American Agriculturist* his method of curing pork, which he has tried for several years with good results, and the plan is now adopted by his neighbors, all deeming it superior in several respects to the brine method: "For each hundred pounds of meat, take 5 lbs. of salt, 1 lb. of sugar, and $\frac{1}{2}$ ounce of saltpeter. Mix the ingredients well, then thoroughly rub both the flesh and the skin sides of the pork. I always do the rubbing in with the hand, although it might be well to use something else in cold weather. The meat should be slightly cut from the bones and filled with the mixture. After this operation is completed, the pork must be layed out on boards for three weeks, dropping on the pieces what of the mixture may remain. At the expiration of three weeks it is fit for the smoke-house."

ZINC VESSELS POISONOUS.—"S. M.," asks why no notice of zinc milk pans has appeared in the *American Agriculturist*. She thinks "they are

light, convenient, cheaper than tin, and if not punched through by sharp points, they are almost everlasting."—*Answer*:—Zinc is very easily acted upon chemically (that is, corroded or rusted,) and the salts formed are poisonous; a very small quantity produces vomiting. As these salts are of light color and easily dissolved, they are not readily seen. Sour milk, fruits, etc., constantly eat off and dissolve portions of the zinc. No substances used for human or animal food should be placed in zinc vessels, or those lined with zinc.

Pickle the Small Onions for Soldiers.

From a letter to the *American Agriculturist*, written by a nurse at one of the soldiers' hospitals at the South, and from a variety of sources, we learn that our soldiers, both in hospitals and in the field, have a strong liking for pickled onions. Almost every one cultivating a garden has more or less of small onions, too small to boil well, but just the thing for pickling, and we urge them to save every one, and pickle them to be sent in bottles, jars, or wide mouthed jugs, to the Sanitary or Christian Commissions, or directly to some hospital or camp. At our request a good housekeeper communicates her method for the readers of the *Agriculturist* as follows: Peel the onions; lay them in weak brine over night; scald them in fresh water for five minutes, not to soften them; drain off all the water; pour over them hot vinegar previously seasoned with a little cloves, mustard, and pepper boiled in. The stronger the vinegar, the less spices required to keep them. After standing two or three days, pour off the vinegar, scald, and return it to the onions. They may then be kept in any convenient covered vessel.

Drying Green Corn—Good Method.

"Housekeeper," sends to the *American Agriculturist* her method of preserving green sweet corn, which she says is always successful. (We have for a long time satisfactorily practised a similar method both with sweet corn and the common sorts): "Gather the corn while still soft; simply scald it on the ears, not boiling it soft; cut it off with a knife; spread it on plates, and dry quickly in the sun when hot, and by the fire or in an oven, at night, and when the sun is not shining warm. It dries quickly, and therefore needs rapid drying, but too high heat spoils it. Keep in a bag in a dry place. The secret of having it good when cooked, is to soak it over night, and boil it well in the same water. It is then almost as good, at any time of the year, as when first gathered. Add no more water in boiling, than will cook away, but avoid the least scorching. Any common corn may be treated in the same way, but is improved by adding a little sugar when cooking. Season with salt, and milk and butter boiled in, the same as for green peas or beans. Cream is still better."

"Higdum."

A lady sends to the *Agriculturist* a recipe for a pickle under the above name, which she says is much liked by her friends. We published something similar, a few years since, but can not recommend the compound as a particularly attractive or digestible one. It may be pleasing to some, and healthful to those who have good teeth to thoroughly masticate the stuff before swallowing it—if they will use the said teeth: "Take equal amounts of onions, green tomatoes, and of ripe cucumbers from which the seeds and skins are removed. Chop the whole together very fine; sprinkle salt over the mass, let it stand over night, and drain off the fluid thoroughly through a sieve or colander; pour over the mass and mix well with it hot vinegar, previously boiled with plenty of mustard, cloves, black pepper, and red (Cayenne) pepper. After a few days drain off the vinegar, scald, and return it. Those who relish sweet oil in salads, add this, after the final scalding. Some add wine at the same time."

[We should think there is quite enough in a mixture like the above, without adding the wine.—Ed.]

Pickled Green Corn.—A lady correspondent of the *American Agriculturist* says she has tried various methods for preserving green corn, but has always failed to keep it in cans, or in any other way than by drying or pickling it. She finds that by pickling it in strong vinegar it makes a very good winter and spring relish.—Another correspondent directs as follows: To one gallon of corn cut from the cob, add one pint of salt. This can be freshened out by putting it into clear water, letting it stand about one hour, changing the water three or four times. Cooked in milk, with butter and pepper added to suit the taste, it forms a palatable dish for winter.

Apple Butter.—"Mary" of Alliance, O., communicates to the *Agriculturist* the following directions for making apple butter: Boil a barrel of cider from sweet apples, to one third its original bulk, after having first taken out two pailfuls in which to cook the apples. Nicely pare and core sweet apples enough to make two bushels of fruit when finished. Boil these in the cider which was reserved for the purpose, until they are a little soft, then pour the whole into the boiled cider, while hot, and cook; stir it until a pulp. Sauce thus prepared, will keep good for several years.

Bird's Nest Sage Pudding.—Contributed to the *American Agriculturist*, by Mrs. P. J. S., of Litchfield Co., Conn.: Pare and cover enough apples to cover the bottom of your pudding dish. Soak one cup of sago in as much water as it will absorb, and pour it over the apples; bake until the apples are cooked soft. If it dries much in cooking, add water. The dish can be covered to prevent a hard crust forming. Other fruits can be used instead of apples. Eat with cream, milk and sugar, or other sauce made according to the taste.

BOYS & GIRLS' COLUMNS.

A Ghost Story.

Do any of our young readers ever get frightened when sleeping alone in a room, or when going through a wood, or a secluded road, or by a grave yard, by imagining that they do see or may see a ghost? Doubtless many of them have had such experiences. The writer had, when a boy, and he has never conversed on the subject, with a person who had not thus suffered. But he has grown older and wiser now, and after studying the subject, is so thoroughly convinced that there has never been a real ghost and never will be, that he could sleep as quietly near a cemetery or in a cave, as if no hobgoblin stories had ever been whispered into childish ears.—We have just read a long ghost story of which the following is the substance. A man had been fishing all day, and retired to rest at night at the house of a friend. He was awakened after midnight by a tapping at his window, and saw some white object moving about his room. He also plainly heard a curious sound "fit," "fit," "fit." In his fright, he called for his host, who ran in with a light, but was tripped up, and his light put out in the fall. Both sprang from the room, being tripped several times before reaching the door, and they waited for daylight in great terror. Then the mystery was thus explained. The fisherman on going to his room had unjointed his rod and carried it with him, forgetting to remove the minnow (little fish) used as a bait. A large white cat coming in, had snapped at the bait and been caught by the hook. She drew the line from the reel and wound it around the bed posts and chairs, and in striving to get loose made the noise "fit," "fit," "fit." The frightened man had heard these sounds and the beating of a lilac bush against the window, had seen the white ghost (cat), and stumbled over the line. Every ghost that has been reported, if investigated at the time, would prove to be as unreal, or real, as the white cat caught on a fish-hook.

Intelligence of Fishes.

A writer in a recent English work, "The Angler Naturalist," says: "That fish are not so stupid as many people suppose, is proved by a little incident which was observed at the Zoological Gardens. In some plate-glass tanks were a pike and several perch. These fishes took no notice of our entrance, and continued perfectly supine, though the keeper walked several times past their

tanks, as if about to feed them; but when he walked away from them toward the cupboard where the net with which the balts were caught, was kept, the stolid demeanor of the fish, both pike and perch, gave way to the most intense excitement. They rushed to and fro across their enclosures, straining their noses against the glass, erecting their fins, and exhibiting every token of agitation; and when the keeper, having taken the net, proceeded with it toward the bait tank, the whole shoal fastened their eyes upon him, following every movement, and constantly veering round, as if under magnetic attraction, toward whichever part of the room he turned. It was evident that these fish knew where the net was kept, that the keeper was going to fetch it, and that his doing so was a preliminary to their being fed."

Not Quite a Meteor.

A correspondent of the *Agriculturist* communicates the following incident, which recently occurred near Chillicothe, O.—Some boys who were playing in a cornfield, were startled by a loud rumbling noise not far from them, and on searching for the cause, soon discovered a large boulder (rock), which had evidently just arrived from parts unknown. One of them applied his bare foot to it, when to his great astonishment he found it extremely hot, as though it had just been ejected from the crater of some volcano. Then there was, of course, great wonder where the strange rock could have come from; some thought it had fallen from the sky, as they had read accounts of such phenomena; others supposed a volcano might indeed have burst out at no great distance. If the investigation had stopped with mere guessing, as has often happened when strange occurrences have been observed, the stone would have made quite a noise in the community; but some persevering youngster continued his efforts to solve the mystery, and was at last rewarded with the true explanation. Some one had been burning brush on a steep hill not far distant, and the boulder being set free by the fire consuming the sticks which held it in place, had come tumbling down to the plain below, and thus the meteoric explanation and other startling theories were quickly exploded.

New Puzzles to be Answered.

No. 53. *Mathematical Problem.*—Contributed to the *American Agriculturist* by John White, Alleghany Co., Pa. A farmer bought a circular tract of land at the rate of \$1 a foot for the diameter. He surrounded it with a post and rail fence at \$2 a panel, each panel being 12 feet long, and stocked it with sheep at \$2 per head. His sheep cost him three times as much as his fence, and he had 50 feet square of pasture for every sheep. What did the land, fence, and sheep, each cost?

No. 54. *Illustrated Rebus.*—A truth worth considering.



Answers to Problems and Puzzles.

Answers to Problems in September *Agriculturist* page 281. *Illustrated Rebus*, (No. 50).—C on tin ewe dia dust rib rings C on tent men tea; which, properly arranged and read by the sound, reads: Continued industry brings contentment. No. 51. *Arithmetical Problem.*—A little study of this example shows that the key to its solution is found in the mathematical truth that "The product of the sum and difference of two numbers is equal to the difference of their squares." We leave it unanswered for another month, that our young readers may attempt to successfully use this key. Several have already done so. No. 52. *Enigma.*—The mystical word is Hannah. No. 49. *Mathematical Problem.*—(August No., page 249.) A could do it in 6 days; B, in 3 days.

The following have sent in correct answers; the numbers indicate the problems, etc., answered by each: Henry H. Osgood, 46; (we like to receive new problems, accompanied with solutions); Orient, 44; M. E. Brotherton, 44; George Elcock, 46; S. A. Dickey, 44; W. W. Dickey, 44; "Little Falls," 46; J. N. Miller, 44; C. A. Kaufman, 44; L. O. Gay, 46; Charles T. Pettit, 43; Aaron S. Littleton, 43; James D. McGiffert, 49, 50, 51; W. Jones Rodgers, 51; Wat Van Fleet, 51; Charles P. Hoffman, 51; W. Marsh, 49; John White, 49, 50, 51, 52; D. G. Jones, 49; A. A. Rudolph, 52; C. B. Miller, 49, 50.



CHILDREN OPENING THE GATE.—TRUE POLITENESS.

Engraved for the American Agriculturist.

What is the first thought on looking at this beautiful engraving? Is it about the ragged clothing of the largest boy? No, certainly; for his open, pleasant countenance, and his respectful salute, made by carrying his hand to the place where a hat ought to be, at once make you feel "I like that boy."—Not a thought is given to what he wears. His homely garb makes his kindly look and polite manner even more noticeable. *Good manners are better than fine clothing.* That is the first lesson of the picture.—But there is something more to be noticed. See how trustingly the lad's little sister nestles up to his side, and you can also tell by his brother's face that they are on the best of terms. This lad's politeness, then, is something more than *appearing* pleasant; it springs from a loving nature. He has taken no lessons in the parlor, but his heart prompts him to kind feelings, which show themselves in looks and actions: that is true politeness. We have seen a young man full of smiles and bows for young ladies, when in company, but rude and selfish toward his sister at home; and there are young ladies, so called, that are all sweetness in the parlor, but unfeeling in their treatment of their mothers; such might learn a good lesson from this poor country lad. Many persons who are good at heart might be greatly improved by taking more pains to be agreeable, but it is better to be good and kind, without appearing so, than to *appear* so without possessing those traits. Politeness may be called the oil of society, which enables persons to easily pass along without unpleasant friction. It has made more than one man's fortune. An instance is related of a former Governor of one of the Western States. When a boy, he was once holding a calf, while his mother was milking

the cow. A gentleman approached and said, "Why don't you take off your hat, my little man?" "So I will, sir, if you will hold the calf," replied the boy, respectfully. The gentleman was pleased with the quick answer, but still more with the pleasant way in which it was spoken. He at once became the boy's friend, helped him to an education, and the boy rose to distinction.—But what are these children looking at? Something in the picture tells you, and it will be pleasant to study it out. We think they have opened the gate for a man on horseback.

Boys' and Girls' Garden—No. 7.

The season of flowers has nearly past, and if you have carefully read and thought about what has been said concerning them, you will no doubt wish that it might have been longer, to study new specimens. But we have not yet done with the plants chosen for illustration. After the flower comes the *fruit*, and there is something to be learned about this. In general we are accustomed to regard fruit as something eatable, but correctly speaking, it is the ripened *pistils* of the flower, no matter what its character. In other lessons we have tried to show you the relation of the different parts of the flower, and you have probably observed that they were all subservient to the pistils: the floral envelopes—the calyx and corolla—though they make up the showy part of the flower, are only intended to surround and protect the more important parts. The stamens fulfill their office in furnishing pollen to fertilize the ovules contained in the pistil, in order that they may become seeds. The whole life of the plant is directed towards the formation of seeds by which

to continue its kind, and as the seeds are contained in the ripened pistil, it will be seen that it is the most important part of the flower. After the ovules are fertilized, the petals, stamens, and sometimes the calyx, fall away, and the pistil continues to grow, to accommodate the rapidly-increasing seeds. When the pistil and the enclosed seeds are ripe, they together form the fruit. The fruit presents a great many different forms, and the pistils frequently become very much changed from what we have known them in the flower. It was stated in the last lesson that the Pea had one of the simplest forms of pistil. Garden peas are generally gone by this time, but you will find some pods still on the Sweet Pea. The pea-pod is the fruit of the pea: that is, it is the matured pistil. The change which has taken place is mainly one of size. The little flat green pistil has very much enlarged, and the minute ovules it contained, which were smaller than a pin's head, have become full-sized peas. You will recollect it was stated that all the parts of the flower were to be looked upon as leaves modified to serve a particular purpose, and you had no difficulty in understanding that this might be the case with parts of the calyx and corolla: with the other parts of the flower it is perhaps more difficult to make you see this. Still the botanist looks upon the pistil as a modified leaf, or leaves, and he thinks that you can have no difficulty in imagining a pea-pod as a leaf folded together and bearing the peas on the part where the edges of the leaves meet. Imagine the edges of the leaves turned in a little, and you will see that they form a place to which the ovules are attached. This portion is called the *placenta*, and is a mere line in the pea, but it is much more conspicuous in other fruits.

The pistil of the pea, in ripening to become the fruit, undergoes but little change except that of size. The style withers away and the ovary grows on to form the fruit, which in this case is a pod. The ovary when ripe is called the *pericarp* (meaning around the fruit,) and this in the pea remains thin and leaf-like. The fruit of the



Fig. 34.—HALF OF A PEA POD.

Morning Glory is unlike that of the pea in several respects. The pistil of the Morning Glory is a compound one and we have a compound fruit. If we cut across the fruit before it is quite ripe we find that there are three divisions separating it into three compartments or *cells*, and each of the cells contains two large seeds.—When the fruit is quite ripe the pericarp becomes dry and paper like and comes apart in three pieces to allow the seeds to fall out. The fruit of the Tomato looks very unlike that of the Morning Glory, but upon cutting it open we shall find that it is not so very different. For this examination it is necessary to select a roundish and rather small Tomato, as by high cultivation the fruit has become monstrous and very much changed from its natural condition, which is to have two or three cells. The round, smooth, and regularly shaped Tomato will, when cut open crosswise, generally present the appearance represented in the figure given below. You will notice that in ripening the pericarp has become very much changed, instead of being dry and thin, as in the Pea and Morning Glory, it has become thick and pulpy. You will generally find three divisions showing that the ovary was three celled. The placenta is very large—the white portion in the engraving—and bears a great number of seeds distributed all over its surface. Each seed is



Fig. 35.—MORNING GLORY FRUIT.

surrounded by an abundant pulp. Pulpy fruits like the Tomato are called berries. The Melon when cut open shows you three placentas to which the seeds are attached, but they are not united in the centre, as in the Tomato.

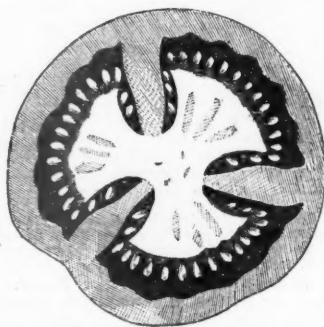


Fig. 36.—TOMATO CUT OPEN.

surrounded by an abundant pulp. Pulpy fruits like the Tomato are called berries. The Melon when cut open shows you three placentas to which the seeds are attached, but they are not united in the centre, as in the Tomato.

Origin of the Name, "Canada."

A book printed in London, in 1698, written by L. Hennepin, and entitled, "A New Discovery of a Country Greater than Europe," gives the following explanation of the name "Canada." "The Spaniards were the first who discovered this country; but at their arrival, having found nothing considerable in it, they abandoned it, and called it 'Il Capa di Nada,' that is, a Cape of nothing; hence by corruption sprung the word Canada, which we use in all our maps." More recent explorers and settlers have discovered that the name was very far from expressing the truth.

Indian Fun—A Snake Story.

The following occurrence was related by Col. Edward Raymond, one of the earliest settlers near Lake Champlain, N. Y. He was on the lake in a canoe with an Indian named Big Bear, whom he had employed to row him to a distant point. In their course they passed near a sloping ledge of rocks where lay a large number of rattlesnakes asleep in the sun. The Indian looked at the Col., and inquired, "Raymun love fun?" "Yes," was the reply. "Well, then, Raymun have fun: mind Indian and hole a gium" (keep still). So he rowed silently to the shore, cut a crocheted stick of hazel, and carefully placed the crocheted stick on the neck of a serpent that lay asleep close by the water's edge. "Take um now Raymun; hole fass." The Col. then took hold of the stick, keeping the serpent down, while Big Bear tied up a little sack of powder with a slow match attached to it. He

made this fast to the snake's tail, lighted the match, and gave the order "Let um go," at the same time pushing the canoe away from the shore. The snake being liberated, crawled away to his den. Big Bear immediately stood up and clapped his hands, making as loud a noise as possible, which roused the snakes, and they, too, quickly disappeared. "Now look Raymun, now look, see fun," said he, and in about a minute the powder exploded, when there was fun alive, for the men, though not for the reptiles. The snakes in hundreds covered the rocks, all hissing, rattling, twining, twirling, and jumping, in every way imaginable. Col. Raymond burst into a loud laugh, but the Indian, true to his nature, maintained the utmost gravity, though doubtless he inwardly enjoyed the sport quite as well as his friend.

Curious Letter.

An old German work contains the following curious letter from the manager of a traveling theatrical company, to his business agent: "We have arrived here safe, after a long and troublesome journey, the ordered goods have arrived in good order. The messenger has brought us, *snow and hail*, in good order, the *storm* came one day later. I am sorry to say that the *thunder* burst up and the *lightning* we had to patch up also. The *ocean* and *rivers*, I wish you to send by canal as the freight is cheaper, and do not forget to send us *new clouds*, and a *new sun*. But the most important thing we want is a *Bay*, as ours has been burnt. Then we want a few yards of *forests*, and at least twenty yards of *clear air*. Roll them all up, and send them immediately." These terms referred to the different parts of the scenery on the stage.

A Modest Request—A Capital Story.

It is related of President Lincoln, that recently a farmer applied to him to secure his assistance in collecting a bill against the government, for damages done by troops passing through his premises. The President referred him to the proper officer, whose duty it was to attend to such matters. But the man was anxious that Mr. Lincoln should examine the case personally, and give an order to have it settled. "Then," said he, "they will attend to it at once; otherwise I may have to wait a long time." "But I have no leisure to look after such things," said the President. "It won't take but a few minutes," urged the man. "You remind me of what occurred to a friend of mine on the Mississippi river," said the President. "He was Captain of a steamboat, and when passing through the rapids, he always took the wheel, and steered the boat himself. One day when he was in the most difficult part of the stream, a boy came blubbering up to him crying, 'Captain, Captain!' 'Well, what do you want?' 'Oh! do stop the boat, I've lost my apple overboard.'" The farmer saw the point of the story, and wisely concluded to collect his bill in the usual routine manner.

Taking it Coolly.

A not very skillful mason was employed to build an oven, which he completed in his usual style. The first time it was used, the whole structure tumbled into ruins, and the owner having found the mason, the following conversation occurred: "I have some news for you." "Ah! What is it?" "The oven you built for me has fallen down." "O that is nothing new—if it had fallen up that would have been news indeed." In spite of his vexation, the owner had to laugh at the mason's coolness, and left him, to seek a good workman to rebuild the oven.

A large number of Boys and Girls have in past years secured various articles from our premium list. Young persons are often the most successful canvassers. We have in mind a boy who secured a sewing machine for his mother; another who got a wringing machine for his mother; and a school which recently obtained a melodeon for their Room, in the same way, for everybody was ready to help them. A liberal hearted gentleman paid the freight for them. These are only examples of what has been done, and may be done again.

A CURIOUS SIGN.—A correspondent writes to the *Agriculturist*: "In Yreka, the county town of Shastayou County (one of the northern counties of California, and on the Oregon line) the following sign hangs with glaring letters in front of a baker's establishment, viz.: 'S. Gillig's, Yreka Bakery.'" At first sight this presents nothing remarkable, but upon examination it will be seen that the letters if read backwards, form exactly the same sign. Such a coincidence is extremely rare.

A CROOKED COMPANY.—A Hibernian sergeant was drilling an awkward squad of volunteers, and spite of all his efforts, failed to bring them into a straight line. At last, out of all patience he cried out, "Oh! what a bent row: just come out lads and look at yourselves."

PREMIUMS for 1864.

Or Pay to Voluntary Agents who attend to Collecting and forwarding Clubs of Subscribers to the American Agriculturist.

(Premiums open to all—No Competition.)

Owing to the greatly increased cost of everything connected with publishing, and our determination not to raise the subscription price, and not to diminish the intrinsic value of the paper, but rather to improve it, we had expected to give no premiums hereafter, excepting the Great Strawberry which will be a premium to every subscriber, and ought to be enough to secure as many subscribers as could be desired. But the previous plan has worked well, and many of those who have obtained premiums hitherto, express a strong desire to have an opportunity to get some of the higher premium articles. After looking the ground all over, and making a careful estimate, we have decided to offer one general list, as named below. Any one desiring to do so, can go to work at once, and perhaps this very month get names enough for a good premium. All names sent in now, get the great strawberry plants and the two extra numbers. Note that five cents extra are needed when the "Agriculturist Strawberry" plants are desired, if to go by mail. This will, of course, be paid by the subscribers themselves.

The names (with money for each,) can be sent in as fast as gathered, so that the subscribers can begin to receive their papers. The premium will be paid to any one as soon as his list is completed. But, let it be distinctly noted, we can reckon for premiums *only* those names which are marked as for Premiums, when they are sent in. Hereafter all the separate names thus sent and marked as for premiums, will be at once numbered in a special book, with the name of the sender, so that we can immediately turn to any canvasser's list, and see when it is full.

Premium clubs need not necessarily be all at one Post-Office. Each list ought to contain a fair proportion of new names, for it is to bring the paper before new subscribers, that the premiums are in part intended.

N. B.—Every article offered, is a good one—nothing second-hand or of poor make, or quality, or kind. We intend in all cases to deal fairly with every one, and esteem as special friends those who labor to promote the interests and circulation of this journal.

This list may perhaps be altered or amended from time to time, if circumstances or change of prices, etc., require, but all names sent in during any month, will be reckoned at the premium rates announced for that month.

Canvassers need not choose any particular premium until they get all the names they can. To avoid confusion, please send in the exact amount with each list of names. In special cases, the whole sum for a premium list may be forwarded, and the premium be received at once—the names to be sent in afterward.

No charge is made for packing or boxing any of the articles in this Premium List. The books and the Premiums K, to S, inclusive, are DELIVERED to any part of the United States and Territories, free of all charges. The other articles cost the recipient only the freight after leaving the manufactory of each. *Every article is new and of the very best make.*

Table of Premiums for 1864.

Names of Premium Articles.		Price of Premium.	Names at each.	Names at each.
			Names at each.	Names at each.
GOOD BOOKS—See terms below.				
A—American Cyclopaedia (Appleton's New).	\$35 00		100	250
B—Best Family Clothes Wringer.	\$7 00		19	45
C—Nonpareil Washing Machine.	\$16 00		40	90
D—Sewing Machine, (Wheeler & Wilson).	\$45 00		96	195
E—Sewing Machine, (Wilcox & Gibbs).	\$40 00		82	185
F—Woodruff's Mercurial Barometer.	\$8 00		20	63
G—Woodruff's Mercurial Barometer.	\$12 00		30	84
H—The Aquarius.	\$10 00		25	67
I—Five Octave Melodeon (best).	\$80 00		170	340
J—Four Octave Melodeon (best).	\$55 00		120	234
K—Seven back Volumes Agriculturist.	\$8 00		28	64
L—Six do do do do.	\$7 44		25	58
M—Five do do do do.	\$6 20		22	49
N—Four do do do do.	\$4 96		19	42
O—Three do do do do.	\$3 72		16	38
P—Two do do do do.	\$2 48		13	34
Q—One do do do do.	\$1 24		10	25
R—Jacob's Portfolio Paper File.	\$1 50		17	17
S—Osborn & Hodgekin's Paints.	\$1 00		17	17
T—Premium Cylinder Plow.	\$10 00		28	78
U—Eagle Plow No. 20.	\$9 25		30	69
V—Hay and Straw Cutter (best).	\$9 00		28	65
W—Steel-tooth Cultivator (best).	\$7 50		25	53
X—Family Lard and Wine Press.	\$7 00		24	54

Descriptive Notes on the Premiums.

* **Books.**—Any person sending in 20 or more subscribers, may select from our book list (page 317) to the amount of 10 cents for each name sent in at the club price of 80 cents, or to the amount of 30 cents for each name at \$1. (No books sent for less than 20 names). The premium books will be delivered anywhere in the United States, or to the border of the British Provinces, free of all

cost, by mail or express. Many Farmers' Clubs have, by means of this premium, obtained a good library.

A—Appleton's New American Cyclopedia.—This magnificent work is now completed, and ready for immediate delivery. It consists of 16 heavy volumes, averaging 800 large two column pages, or in the whole work, 12,804 pages! (The books fill up over a yard of shelf-room.) It is in reality a complete library of itself, embracing full information upon every topic of human knowledge, alphabetically arranged for convenient reference. The subjects discussed number over twenty-five thousand! It is hardly possible to name anything upon which pretty full information may not be readily found in the Cyclopedia. Many who can not purchase the work may be able to obtain it through our Premium offer. It is worth a year's effort in raising subscribers, though not a few may make up a club of 130 names in a brief time.

B—Best Clothes-Wringers.—This is a most excellent Household Implement, which should be in every family. It can be set upon any form of tub, and by turning with the right hand and picking up the garments with the left, they are pressed rapidly and easily between two elastic rollers, and drop out into a basket quite as free from water as they can be wrung by the hardest twisting by hand. Every lady knows that hand wringing is really harder upon the arms and shoulders than even the washing; while the twisting stretches the fibers with lever power, and hastens the wearing out. All this is avoided by the Wringer, which is in truth a strength-saver, and a clothes-saver. We have had one of the first imperfectly made instruments in weekly use for nearly four years, and it is as good as ever, while it has paid for itself many times over. A child can with this readily wring out a tub full of clothes. Our Premium Wringer are of the family size, and of the best manufacture, and are provided with cozs, and with springs, so that they will wring equally well any article from a blanket to a baby's stocking. The Wringer weighs only 15 lbs., occupies but a small space, and can be carried by hand, or sent by express, or as freight to any point, and is ready for instant use on removing the light packing box.

C—Nonpareil Washing Machine.—The best recommendation we can give of this, is, that while we have tried fifteen or twenty kinds, this is the only one that our "help" continue to use without being required to do so. It acts somewhat like the old "pulling mill": the clothes are put into the hot water, and beat by two pounders which constantly turn them over. The beaters are moved alternately by a crank, provided with balance wheel which adjusts the force required so as to make the turning easy. Take it all in all, the Nonpareil is the best Washing Machine we have found. If we could find a better one, we should put it in our list, for anything that helps to reduce the hard work of washing day, is a godsend. The machine can go as freight, or by express to any part of the country, and we believe will give better satisfaction than any other yet brought out.

D—E—Sewing Machines.—We need not enlarge upon the benefits of Sewing Machines. They are doing more than all else to save the lives and health of females. It is no exaggeration to say that a woman can in a day do ten times as much ordinary sewing with a machine, as she can do by hand. We know many ladies who formerly employed a seamstress several weeks every year, but who now do all their family sewing, with less confinement and wear than when the common needle was their only resort. The interest on a fifty dollar Machine is only \$3 to \$4 a year, which is a small consideration compared to its advantages. Five hundred families ought to be supplied through our premium list this year. At least 80 to 100 copies of the *Agriculturist* ought to be taken in every town, and would be if some enterprising man or woman would go round and gather them. Two or three ladies might join their efforts, and get a machine for use between them. We offer two kinds of Machines, both varieties of which we have had in use for several years, and with great satisfaction. They are both supplied with the Hemmer, and are sent out with full instructions for use.—The **Wheeler & Wilson Machine**, we have used during five years, and can bear full testimony in its favor. More of these machines are sold and used, we believe, than of all the other good kinds together, which is a strong proof of the satisfaction they give.—This sews with a double thread, both sides of the fabric showing the same stitch.—The **Wilcox & Gibbs Machine**, we have used for over three years, and for most kinds of sewing it is excellent. It is very simple in its operation and can be worked by those who have the smallest amount of mechanical skill. It can be used for most kinds of sewing, and may well be adopted generally, at least where the higher priced machines can not be afforded. We know many who prefer this to any other.—For every kind of sewing, especially where the same stitch is required on both sides, we prefer the Wheeler & Wilson.

F—G—Woodruff Mercurial Barometer.—This is conceded to be the best and cheapest instrument for general use, which is now offered to the public. The peculiar form of mercury cup invented by Mr. Woodruff, renders the instrument far more portable than any thing previously made. The safe delivery of every instrument given by us as a premium, is warranted by the manufacturer (Charles Wilder, Peterboro, N. H.), when to be sent within 1,500 miles. The instruments are beautifully made, are about 3 feet long, and are sent direct from the factory, with no expense save the express charges which vary from 50 cts. to \$1.50, according to the distance. We offer two forms which differ mainly in the style of case, both being supplied with *Thermometer and Vernier*. The \$12 form is of course more ornamental, and the more desirable instrument, though either of them is highly valuable. A barometer is to farmers or others on land, what it is to sailors at sea—an indicator of the weather to be looked for. There are many times every year when the indications of the barometer in regard to the weather, will often be of more value than its whole price, while the interest on its cost would be less than half a dollar a year.

The habit of observation, and of scientific study cultivated in a family of children where a Barometer is used, is a valuable consideration.

H—The Aquarius.—This is an excellent little portable force-pump, useful in many ways. One can take this instrument in his hand with a pail of water, and throw a considerable stream to any point where a fire may be breaking out, and do more to quench it, than he could with a dozen pailfuls dashed on, even if the fire could be reached. We have thrown water from the ground up against the third story windows of a house. The Aquarius is very useful for watering gardens, for washing windows, carriages, etc., etc. It is provided with rubber suction pipe, to draw water from a pail, tub or bucket, and an ejection pipe having both a nozzle for throwing a stream, and a rose or sprinkler. It has also an air chamber for giving a constant stream. It is a handy instrument, for every household, aside from its benefit as a fire engine with which many an incipient fire has been subdued.

I—J—Melodeons.—None need to be told of the pleasure given by a good Melodeon in a household, or of its utility in the Week Day and Sabbath School Room, and the Church. "Music hath charms to soothe the savage breast," and we hesitate not to say that a benign influence is exerted upon every house and school room where a Melodeon or other good musical instrument is found.—We offer two sizes in our list above, and those of a different price may be selected for a proportionate number of subscribers. (For sizes, style, prices, etc., send a stamp to George A. Prince & Co., Buffalo, N. Y., and get one of their illustrated descriptive Catalogues, which will be sent free.) We have used one of these Melodeons during four years past, and it continues to give the highest satisfaction. It has not been tuned or otherwise repaired in all that time. The premium instruments will be shipped direct from the manufacturers at Buffalo, ready boxed. They can go by railroad, steamboat, express or otherwise, as desired by the recipient. It will be an easy matter for Churches, and both Week Day and Sunday Schools to unite their efforts and secure an instrument for the public use.—Many have done so already.

K—Q—Seven Volumes of the Agriculturist.—Here is a whole *Agricultural, Horticultural, and Household Library*, embracing also a large amount of interesting reading for Children and Youth, and thousands of instructive and pleasing engravings. Each volume contains more printed matter than half a dozen dollar books of the usual size. There are in each volume from one to two thousand articles and condensed items, among which every reader will find something useful to himself and family. We send them post-paid (as in the above table), in new clean numbers, printed from stereotype plates as needed. The last number of each volume contains an index to the whole volume. (Any person preferring them bound, can receive them in this form, neatly done, at an expense of 65 cents per volume, for the cost of binding, and extra postage required when mailed in this form—or if called for at the office, or sent by express, or otherwise, if not to be pre-paid, at a cost of only 25 cents per volume.) Let every one selecting this premium be sure to name what volumes are desired, or how many of each, as duplicates of any number can be chosen if preferred.—We can only supply from volume 16 to volume 22 inclusive. The previous volumes are not stereotyped.

R—Best File for the Agriculturist.—Jacob's Portfolio file, made just to fit the *Agriculturist*, with the name of the paper gilded on, is exceedingly convenient. It is a neatly embossed or stamped cover, made so that each successive number of the paper can be inserted in a minute, when it is strongly held in. The numbers thus fastened together are as convenient as a bound book. When one volume is completed, it can be removed and stitched together, and the numbers of a new volume be inserted. A single cover will answer for a dozen or twenty successive years. It is without doubt the most perfect paper file yet made. It is sent post-paid, as above.

S—Water Color Paints.—Those offered (Osborne & Hodgkinson's) are the best of American Manufacture, and though not so fine for artist's work, as some of the imported (which now sell at six times the price), they answer very well for common sketching, particularly by children and beginners. They are especially useful to children, as their use tends to develop a taste for form and color, and skill in the use of the pencil. We send them post-paid, in a neat mahogany case containing 24 small cakes of assorted colors, with brushes, etc.

T—U—Premium Plows.—The two named in the table above (*Cylinder and Eagle No. 20*), are two of the best farm plows in use, and will doubtless give ample satisfaction to any one securing them as premiums. We have not space for a particular description. The Eagle Plow is well-known. The working of the Cylinder Plow, and other items concerning it are described on page 136 of Volume XX, (May 1861).

V—W—Hay and Straw Cutters—Steel-toothed Cultivators.—These implements are of first importance to all farmers, some of whom may find it most convenient to secure them through our premium list. We send the best implements we know of at the prices named.

X—Family Lard and Wine Press.—This is a very convenient Household implement for pressing out lard or tallow, the juices of Grapes, Currants, Berries, etc.

Other Premiums.—We have on trial several other articles, and expected to offer more of them this month—but those most carefully experimented with, did not prove good enough to be strongly commended. Other new articles are on trial—some of which may be offered next month. A new Apple Parer was decided upon, but we can not yet get the promise of a supply. Any future premium articles will be offered on similar terms to those in the table above, these terms being the most favorable possible.—We still solicit further suggestions from subscribers in regard to what would be most desired in the Premium List.

The Markets.

AMERICAN AGRICULTURIST OFFICE.
New-York, Friday Morning, Sept. 15, 1863.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS. Flour, Wheat, Corn, Rye, Barley, Oats.
25 days this m'th 335,000 1,734,000 2,019,000 48,250 62,000 491,000
26 days last m'th 350,000 2,361,000 2,619,000 102,500 87,000 974,000

SALES. Flour, Wheat, Corn, Rye, Barley.
25 days this month, 397,000 2,675,000 2,518,000 64,500 7,000
26 days last month, 303,000 2,584,000 2,197,000 81,000

2. Comparison with same time last year.

RECEIPTS. Flour, Wheat, Corn, Rye, Barley, Oats.
25 days 1863... 335,000 1,734,000 2,019,000 48,250 62,000 491,000
26 days 1862... 421,000 4,478,000 2,541,000 91,000 43,000 910,000

SALES. Flour, Wheat, Corn, Rye, Barley.
25 days 1863... 397,000 2,675,000 2,518,000 64,500 7,000
26 days 1862... 513,000 5,482,000 3,065,000 104,500 66,537

3. Exports from New-York, Jan. 1, to Sept. 16.

Flour, Wheat, Corn, Rye, Barley, Oats.
Bbls. Bush. Bush. Bush. Bush. Bush.
1863... 1,832,899 11,700,100 7,292,761 409,157 116,029
1862... 2,254,501 15,383,811 8,640,113 1,031,646 66,537

4. Exports of Breadstuffs from the United States to Great Britain and Ireland, each of 17 years, ending Sept. 1:

	Flour, bbls.	Wheat, bush.	Corn, bush.	Rye, bush.	Oats, bush.
1863...	1,479,413	23,167,100	10,234,354		
1862...	2,672,515	23,754,709	14,084,168		
1861...	2,561,661	28,533,570	11,705,034		
1860...	717,156	4,988,714	2,221,857		
1859...	1,064,437	423,010	342,015		
1858...	1,295,480	6,555,643	8,317,802		
1857...	849,600	7,479,401	4,746,278		
1856...	1,641,265	7,956,406	6,731,161		
1855...	175,309	834,427	6,679,138		
1854...	1,846,930	6,038,063	6,049,371		
1853...	1,600,449	4,823,519	1,425,273		
1852...	1,427,442	2,728,442	1,487,368		
1851...	1,559,584	1,496,355	2,205,601		
1850...	574,757	461,216	4,753,338		
1849...	1,137,556	1,140,194	12,655,260		
1848...	182,583	241,200	4,590,226		
1847...	3,155,845	4,000,359	17,157,659		
Total for 17 yrs.	2,933,842	123,083,318	110,315,953		

5. Exports from the United States to the Continent of Europe, for nine years, each ending Sept. 1:

	Flour, bbls.	Wheat, bush.	Corn, bush.	Rye, bush.	Oats, bush.
1863...	213,579	2,343,314	89,957	555,205	
1862...	626,672	7,517,472	322,073	1,612,926	
1861...	142,129	3,452,466	101,145	347,283	
1860...	49,243	178,661	12,338		
1859...	51,388	57,845	25,519		
1858...	308,100	390,428	16,343	19,100	
1857...	483,344	2,875,633	543,590	216,163	
1856...	748,408	2,610,079	282,083	1,955,178	
1855...	7,708	4,973	308,429	35,569	
Total for 9 yrs.	2,025,036	16,530,290	1,688,002	4,636,393	

6. Exports from Canada to Great Britain and Ireland, via St. Lawrence R., in each of years, ending Sept. 1:

	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
1863...	687,986	5,722,377	1,578,438	—	—	9,024
1862...	617,308	6,376,905	2,016,040	—	—	780,156

7. Receipts of Breadstuffs at the head of tide water at Albany, by the Erie and other New-York Canals, from the Commencement of Navigation, May 1st, to and including Sept. 9th, in the years indicated.

	Flour, Wheat, Corn, Rye, Barley, Oats.
1861...	661,100 13,340,000 11,153,900 448,000 206,000 3,115,800
1862...	866,206 16,382,800 11,721,500 581,200 281,100 2,509,400
1863...	743,100 10,933,000 15,350,700 264,000 79,800 5,157,500

We present above a series of tables prepared expressly for the *American Agriculturist*, which give, in a very condensed and convenient form for study and reference, the various transactions in Breadstuffs, not only during the past month but for a series of years past. The figures are compiled from an immense number of records, partly from official sources and partly gathered by ourselves. These figures are believed to be very reliable, as no labor or care has been spared to make them perfect. The tables tell their own story so plainly that there is little necessity for explanatory remarks.—Table 1 shows that, excepting in barley, the Receipts at this Port have been less than during the previous month—oats falling off one half. The Sales of Wheat, Flour and Corn have been large.—Table 2 shows a similar falling off in receipts when comparison is made with the same time last year; the falling off in wheat and oats has been very marked. The smaller Receipt is noteworthy.—The Exports (table 3), are also considerably less this year than last.—Tables 4 and 5 show that while the exports for the grain year, ending Sept. 1, were somewhat less than for two years previous, yet they were much larger than in any year between 1847 and 1861. This enormous export of our breadstuffs during each of the past three years (tables 4 and 5), have had a very benign effect upon the finances of our country. Every bushel of wheat or grain exported has saved the export of its value in gold, and has in reality added so much to our aggregate national resources. We can hardly hope for the continuance of so favorable a state of things during the next ten or twelve months, as our advices from abroad show positively that the foreign harvest has been very good, and less of our breadstuffs will therefore be needed. Still, Great Britain never produces enough to supply the home consumption, and as we can furnish breadstuffs cheaper than any other country, there will doubtless continue to be fair shipments of our surplus, which is

considerable, as we have old stocks of wheat on hand, and the past harvest was fully an average one. We had reports of serious disaster to the growing corn by frost, on the closing nights of August, but later accounts show that though the injury was considerable, it was far less extensive than the first newspaper reports indicated. The drouth still prevailing in some sections will further reduce the yield, yet on the whole there will be a fair crop of corn—perhaps nearly an average one, taking the whole country together, if no further casualty occurs. With the remaining stock in the country from last year's crop, there is not the least danger of a scarcity. . . . The Breadstuff markets in this city were less freely supplied and were quiet during most of the past month,—prices fluctuating frequently. Recently rather more favorable market news from Europe, and a rise in Gold and Sterling Exchange, encouraged export buyers, and heavier purchases have been made, the market closing buoyantly. . . . Cotton has been in fair demand,—falling off in price early in the month, but closing at rising rates. The stock here on the 1st inst. was only about 15,000 bales. . . . Provisions have been quite plenty, and prices have been unsettled. The demand has not been very active. . . . Tobacco has been more sought after, owing to the frost reports, and has been held with more firmness. . . . Wool has been in brisk request, particularly within the past ten days, chiefly for manufacturing purposes, especially army cloth-contractors having made very heavy purchases. Prices are firmer and advancing. . . . Hay, Hops, and Seeds have been in more demand. . . . In most other agricultural products, transactions have been moderate. The annexed table will show the changes in prices, since our last, and also the closing quotations.

CURRENT WHOLESALE PRICES.

	Aug. 19.	Sept. 17.
FLOUR—Super to Extra State	\$3 85	\$4 00
Superfine Western	3 85	4 00
Extra Western	4 50	4 80
Extra Genesee	5 30	5 50
Super, to Extra Southern	5 25	5 50
RYE FLOUR—Fine and Super	3 40	3 50
CORN MEAL	3 90	4 00
WHEAT—All kinds of White	1 27½	1 45
All kinds of Red	85	1 30
CORN—Yellow	66	68½
Mixed	66	68
OATS—Western	55	61
State	62	65
RYE	80	90
BARLEY	2 00	3 25
BEANS—per bushel	67	67½
COTTON—Middling, per lb.	15	22
HOPS, crop of 1862, per lb.	48	53
FATHERS, Live Geese, p. lb.	18½	22½
SEED—Clover, per lb.	1 87½	2 25
Timothy, per bushel	2 10	2 40
FLAX, per bushel	9	13
SUGAR—Brown, per lb.	35	45
MOLASSES, New Orleans, p. gal.	25	28
COFFEE, Rio, per lb.	9	23
Tobacco—Kentucky, &c., lb.	15	45
Seed Leaf, per lb.	60	75
Wool—Domestic fleece, p. lb.	55½	70
Domestic, pulled, per lb.	25	30
Wool, California, unwashed	100	10½
TALLOW, per lb.	38 50	44 00
OIL CAKE, per ton	13 25	13 75
PORK—Mess, per bbl.	10 50	10 75
Prime, per bbl.	10 00	10 50
BEER—Plain mess	14	18
LARD, in bbls, per lb.	14	17½
BUTTER—Western, per lb.	16	22
State, per lb.	8	11½
CHEESE	8	10
Broom Corn—per b.	14	18
Eggs—Fresh, per dozen	16	18
POULTRY—Fowls, per lb.	1 00	1 15
Ducks, per pair	1 00	1 50
Geese, each	18	20
Turkeys, per lb.	1 50	2 00
POTATOES—Irish, p. bbl.	1 75	2 00
Mercers, per bbl.	6 50	4 00
Buckeyes per bbl.	1 25	1 37
Sweet Delaware per bbl.	2 00	2 25
Jersey Sweet per bbl.	1 25	1 50
TURNIPS—Ruta бага, per bbl.	3 50	2 50
ONIONS, Red & Yellow p. bbl.	4 00	6 00
CABBAGES, per 100	5	7
DRIED APPLES, per lb.	15	16
DEIRED PEACHES, per lb.	1 50	1 75
PEACHES, choice per basket	75	1 25
Peaches, common per basket	2 50	3 50
APPLES, choice, per bbl.	1 25	2 00
Apples, common, per bbl.	10 00	15 00
PEARS, Bartlett, per bbl.	1 75	3 00
Pears, common, per bbl.	8 00	13 00
PUMPKINS, Cheese, per 100	50	75
TOMATOES, per bushel	2 00	2 50
SQUASHES, Marrow, per bbl.	3 50	5 00
FLUMS, per bushel		

N. Y. Live Stock Markets.—The Cattle markets have been abundantly supplied with animals during the past month, the average being 5,669 per week. At the first market after our last report, with 4,637 offered for the week, prices advanced ¼c., and the stock sold off rapidly. The following week there were 5,820 on sale, and prices fell off ¼c.; cattle about all sold. At the next market 5,194 cattle were offered, and all found purchasers at nearly ¼c. advance. The week ending Sept. 15th brought the largest number of cattle ever seen in New-York and vicinity, for a single week. They footed up over 7,000 head, and nearly all found purchasers, though prices were ¼c. lower than at the previous market. A small number of the best cattle brought 1½c. per lb. for the estimated dressed weight; good steers, 9½c. @ 10c.; common cattle, 7½c. @ 8½c.; and some very poor steers, dry cows, etc., sent in on account of the dry

pastures, went at 6c. @ 6½. Average of all sales about 9½c.

Milch Cows.—About 100 per week are now offered at the regular yards. The demand is not brisk; common to good fresh milkers sell at \$30 to \$40 each; first class \$45 to \$50; fancy animals, at higher figures.

Sheep and Lambs.—Receipts have averaged 15,890 per week for a month past, which is a great increase over the previous month. They have been selling well, and just now there is a large demand for store sheep to winter over. Good fat sheep are worth, for butchering, 5c. per lb. live weight; common sheep, 4½c. Lambs are abundant, and sell slowly at \$2½ to \$3½ each.

Live Hogs.—Are in pretty good demand, at 5½c. @ 5½c. per lb., live weight, for corn-fed; and 5½c. @ 5½c. for distillery hogs. Receipts average 9,506 per week for a month past.

The Weather.—For a month past has been hot and very dry. From Aug. 17th, to Sept. 18, less than one inch of water fell, all told, the most of this inch on the night of Aug. 29th. Pastures and meadows are drying up, and the buckwheat crop will doubtless be short. Early sown winter grain will hardly vegetate until we have rain. Our daily notes, condensed, read: August 19, to 24, clear and hot—25, cloudy, P. M., slight shower at night—25, N.E. rain A. M., clear, cool, P. M.—27, clear cool—28, light rain—29, clear and fine A. M., cloudy P. M., with rain at night—30, clear, cool, with hard frost in some portions of the West—31, clear, cool, fine—

September 1, cool, light rain—2, to 10, clear, fine, moderately cool, getting dry—11, clear A. M., cloudy P. M.—12, 13, light rain, but not enough to do any good—14 to 16, clear, dry, warm—17, passing clouds and shower at night.

Rain Fall for August 4.59, most of which fell before the 12th. The Barometer has marked a pretty even track—from 29½ inches to 30½ inches.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit).—r indicates rain—s, snow.]

JULY.									
1	2	3	4	5	6	7	8	9	10
66	70	68	70	71	72	73	74	75	76
70	71	72	73	74	75	76	77	78	79
70	71	72	73	74	75	76	77	78	79
70	71	72	73	74	75	76	77	78	79
70	71	72	73	74	75	76	77	78	79
70	71	72	73	74	75	76	77	78	79
70	71	72	73	74	75	76	77	78	79
70	71	72	73	74	75	76	77	78	79
70	71	72	73	74	75	76	77	78	79

AUGUST.									
1	2	3	4	5	6	7	8	9	10
72	74	76	78	80	82	84	86	88	90
74	76	78	80	82	84	86	88	90	92
76	78	80	82	84	86	88	90	92	94
78	80	82	84	86	88	90	92	94	96
80	82	84	86	88	90	92	94	96	98
82	84	86	88	90	92	94	96	98	100
84	86	88	90	92	94	96	98	100	102
86	88	90	92	94	96	98	100	102	104
88	90	92	94	96	98	100	102	104	106

SEPTEMBER.									
1	2	3	4	5	6	7	8	9	10
60	56	52	48	44	40	36	32	28	24
56	52	48	44	40	36	32	28	24	20
52	48	44	40	36	32	28	24	20	16
48	44	40	36	32	28	24	20	16	12
44	40	36	32	28	24	20	16	12	8
40	36	32	28	24	20	16	12	8	4
36	32	28	24	20	16	12	8	4	0
32	28	24	20	16	12	8	4	0	-4
28	24	20	16	12	8	4	0	-4	-8

To Sunday School Teachers and Others.

The Book of "Lessons for every Sunday in the Year," has given a satisfaction, and met with a success far beyond any one's expectation. It was at first written on a plan prepared by the Editor of the *Agriculturist* for his own School, and the copyright was freely given away to others who undertook to supply the public demand that sprang up. It has been adopted and used generally in the Sunday Schools and families of almost all Christian Denominations alike. Nearly or quite one hundred thousand copies have been sold by the different Publishers and S. S. Depositories, within the present year. Successive editions published at the *Agriculturist* Office alone, have run up to full twenty thousand copies. The following editorial, which we have learned is from the pen of John Hart, LL.D., the well-known Teacher of Philadelphia, and Editor of the *Sunday School Times*, will indicate the reception the book has met with:

From the *Sunday School Times* (Philadelphia,) March 14.

"A NEW QUESTION BOOK.—We have just been examining a little book published by Orange Judd, (of New-York City,) called 'Lessons for Every Sunday in the Year,' and have risen from the examination with a feeling of thankfulness that such a book has been made. We have never seen a Question Book containing so many conveniences and advantages as this, so many excellences, both positive and negative. Mr. Judd is a life-long Sabbath-school man, and this book has been the fruit of the experience of himself and some of his friends in trying to meet the practical wants of the Sabbath-school. Like all good text books, it has grown out of actual necessities and experience; it is a growth rather than a work. We advise every Superintendent to send at once for a copy."

The Book can be obtained at the *Agriculturist* Office in large or small quantities, at the uniform price of 10 cents per copy. If to go by mail, the postage to be pre-paid, is 3 cents each copy in packages of ten or more. The postage being rated by the 4 ounces, under the new law, the price for less than ten pre-paid by mail is:

1 copy, 14 cents.	4 copies, 53 cents.	7 copies, 90 cents.
2 copies, 28 cents.	5 copies, 66 cents.	8 copies, 104 cents.
3 copies, 42 cents.	6 copies, 80 cents.	9 copies, 118 cents.

Business Notices.

Eighty Cents a Line of space.

THE CRAIG MICROSCOPE.



This is the best and cheapest microscope in the world for general use. It requires no focal adjustment, magnifies about 100 diameters or 10,000 times, and is so simple that a child can use it. It will be sent by mail, postage paid, on the receipt of \$2.25, or with six beautiful mounted objects for \$3, or with 24 objects for \$5. Address HENRY CRAIG, 180 Centre-st., New-York. A liberal discount to the trade.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(Invariably cash before insertion):

FOR THE ENGLISH EDITION ONLY.
Fifty cents per line of space for each insertion.
One whole column (145 lines), or more, \$60 per column.
Business Notices, Eighty cents per line of space.

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Ten cents per line of space for each insertion.
In both English and German, Fifty-five cents per line.
One whole column (130 lines), or more, \$10 per column.
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Wanted.

A GARDENER who has a Mechanical genius, and the use of carpenter's tools. Applicants for the place will give their qualifications, expectations, and references in full. Also enclose postage stamp. Address PRINCIPALS of Mt. CARROLL SEMINARY, Carroll County, Illinois.

WANTED an experienced Gardener, having a knowledge of fruit culture. Address G. S. NORRIS, Reisterstown, Md.

WANTED TO RENT, by a practical FRUIT GROWER, a small place of 10 to 20 acres, good soil and buildings. Within 2 hours of New-York by steam boat. New-York preferred. Address with particulars "FRUIT GROWER," care of American Agriculturist, 41 Park-row, N. Y.

FOR SALE—A Farm of 180 acres, near Trenton, New Jersey—suitable for Dairy Truck or Grain—Water front on a navigable stream.

Also a Farm of 72 acres in Monmouth Co., New-Jersey, 3 miles from Camden and Amboy R. R. Apply to B. Gill, Allentown, Monmouth Co., N. J., or to JOHN C. T. SMIDT, 11 Wall street, New-York.

900 ACRES of choice improved Farm land, in Will Co., Ill., 40 miles from Chicago, 10 miles S.E. from Joliet on the Illinois canal, and six miles south of New Lenox Station on the Chicago and Rock Island R. R. This tract is equal to any in the state for grain or grass, will be sold low, either entire or in subdivisions of not less than 80 acres. Terms ¼ down—the balance at the convenience of the purchaser. For particulars address the subscriber through Joliet P. O., or apply to him personally on the premises. JOHN YOUNG.

FOR SALE.—A Splendid Farm of 335 acres, in La Grange Co., Ind., with extra good buildings, good Orchards, good fences and running water. Price only \$11,500. Terms easy. Title perfect. For particulars, Address S. B. JENES, Ontario, Ind.

New Brunswick Nurseries, N. J.

EDWIN ALLEN offers a full assortment of nursery articles, too full to enumerate. The stock of PEAR TREES is unusually large, and in beauty of growth and form unequalled. A general catalogue of the nurseries furnished gratis.

60,000 CONCORD GRAPE VINES, ONE YEAR OLD, FROM CUTTINGS.

No. 1, \$3 00 per 100, or \$70 00 per 1000.

No. 2, \$6 00 per 100, or \$50 00 per 1000.

No. 3, \$40 00 per 1000.

GEORGE SEYMOUR & CO., South Norwalk, Conn.

A Supplement to Dr. Ure's Dictionary of Arts, Manufactures, and Mines.

1 large 8vo. vol. Cloth, \$6 00. Sheep, \$7 00.

This volume of Ure's Dictionary of Arts, Manufactures, and Mines, contains the additional knowledge which has accumulated within the past ten years. Not a year has passed but that some important improvements in the Arts and Sciences have taken place, all of which form an important increase to knowledge, which can not well be dispensed with by those who are engaged in the various pursuits in which they are employed.

The Natural Law of Husbandry.

By JUSTUS VON LIEBIG. Edited by JOHN BLYTH, M. D. 1 vol., 12mo., pp. 327. Price, \$1 50.

D. APPLETON & COMPANY, 443 & 445 BROADWAY, NEW-YORK.

MME. DEMOREST'S MIRROR OF FASHIONS.—The splendid Fall Number now ready, with splendid illustrations, five full-size Patterns, and other valuable novelties. Single copies, 25 cents; yearly, \$1, with valuable premiums. Postage on premiums, 2 cents. The Summer Number is also sent to all new subscribers, without charge, when requested. Form of an order to be sent to No. 423 Broadway, N. Y., with full address. MME. DEMOREST will please send the Mirror of Fashions for one year, commencing with the Fall Number, for which send enclosed \$1, and 2 cents for postage on the premiums; also, send the Summer Number, and oblige yours.

BEAUTIFUL COUNTRY HOMESTEAD Near New-York City.

All finished and ready to be enjoyed without further care or trouble.

A very desirable Homestead, of nearly 2 acres, within fifty minutes ride from Wall-st.—hourly communication from 6 A. M. to 7½ P. M. and at 11 P. M.

The Buildings are commodious, and the grounds are fitted up in the most complete order, with every desirable kind of shrubs, trees, fruits, etc., etc.

In short, it is just such a place as any one would desire to enter upon and enjoy without further trouble. Good Churches and Schools very convenient.

It will be sold for less than it cost in gold currency.—Price \$17,000, which may be reduced by sale or reservation of three or four valuable building lots, if the whole ground is not wanted. Part of the purchase money may remain for a term of years if desired. For full particulars, inquire at the *Agriculturist* Office, 41 Park Row, New-York.

WHEELER & WILSON'S HIGHEST PREMIUM



SEWING-MACHINES.

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"There is no better family machine than this made, as we have proved by use in our own family."

American Agriculturist.

PREMIUM CHESTER WHITE PIGS. Progeny of Hogs that have taken State and United States Premiums sent by Express to all parts of the United States, Canada, Cuba and South America. Address N. P. BOYER & CO., Gun Tree, Chester Co., Penn.

NORTH DEVON CATTLE.—The undersigned offers for sale, in one lot, at the average rate of one hundred dollars per head, his entire herd numbering about thirty head of North Devon Cattle, collected and bred by himself with great care during the past ten years, and consisting principally of descendants of the bull Uncas (winner of two first premiums at exhibitions of the United States Agricultural Society) and of imported cows. For particulars apply to
J. HOWARD McHENRY,
Pikesville, Baltimore Co., Md.

Nursery for Sale.

Desirable nursery and green-house stock for sale, and land to lease (if desired), on reasonable terms. Situate on the best avenue of the city of Milwaukee, collected and bred by J. GIFFORD & CO., Spring-st. Nurseries, Milwaukee, Wis.

50,000 Cherry Currants.

5,000 Grape Vines. (1, 2 and 3 yrs. old.)

5,000 "Ravenswood Pear" Trees.

(This pear, although it has received no First Premium yet, is nevertheless the best Summer Pear in this country or anywhere else.)

1,000 Downing's Mulberry Trees, together with a great variety of other fruit trees, etc., will be sold at the very lowest prices.

Send for a Catalogue, which are mailed free to all applicants.

N. B.—The above Nursery is situated near Jackson Avenue, (the grand Avenue leading from Hunter's Point to Flushing,) two miles from James Slip Ferry.

BLOOMINGTON NURSERY, ILL., 160 acres. Apple Trees,—best stock ever offered, \$30 to \$60 per 1000—also Pears, Grapes, and small fruits, with general assortment. Ornamental Nursery stocks, &c., 30,000 Tulips, with Hyacinths, Crocus, &c. Plant in Fall. Send red stamp for catalogue.
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Send for our CIRCULAR, giving description of varieties that have proved the most valuable during the past season with prices of plants, and other information.

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BOYDEN'S GREEN PROLIFIC STRAWBERRY,

50 cts. per doz. \$2 per 100, \$8 per 1000, at

PHILLIPSBURG NURSERIES.

ALSO

Fruit and Ornamental Trees, &c.

CHARLES DAVIS, Jr., Phillipsburg, N. J.

Genuine Strawberry Plants

Of the best varieties, both old and new. For sale at the LOWEST living rates. Catalogues gratis.

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NOW READY!

OUR NEW PRICE LIST, of STRAWBERRIES, RASPBERRIES, BLACKBERRIES, CURRANTS, GOOSEBERRIES, GRAPE VINES, &c., &c.

is now ready, and will be sent to all applicants free of charge

J. KNOX,
Box 155, Pittsburgh, Pa.

SUPERIOR STRAWBERRY PLANTS of almost every variety at low figures. Send for a list of prices.
SAMUEL L. ALLEN, Cinnaminson, Burlington Co., N. J.

REID'S NURSERIES, ELIZABETH, NEW-JERSEY.

For sale this Fall, a general assortment of Nursery

Stock consisting of

APPLES Standard and Dwarf,
CHERRIES do. do.
PEARS do. do.
PLUMS do. do.
PEACHES do. do.

Apricots and Nectarines, Grape Vines, Native and Foreign, Figs, Currants, Gooseberries, Raspberries, Blackberries, Strawberries, &c., &c.

The collection of Fruits cultivated are extensive and embrace all the different varieties that have been found of value as well as those of late introduction.

The ornamental department is also extensive, consisting of Shade Trees and Ornamental Shrubs, with a fine collection of Evergreens.

The above can be furnished in any quantity and of various sizes, suitable for Lawn or Park planting. Also a large stock of Evergreens, and Deciduous plants for Hedges or Nursery planting, all of which will be sold at low rates.

Orders by mail addressed to the undersigned or left at the Nursery will have prompt attention.

Catalogues forwarded on receipt of stamp.

DAVID D. BUCHANAN, Superintendent.

Fruit and Ornamental Trees.

We offer a large stock at low rates of

APPLE, PEAR, CHERRY, PLUM, and PEACH TREES of superior growth and quality.

Also NATIVE GRAPE VINES, consisting of Concord, Hartford Prolific, Delaware, Diana, Rogers Hybrid, &c., &c. STRAWBERRIES—Triomphe de Gand, Austin Seedling, and other popular varieties.

A large stock of Forest and Evergreen Trees, and Hedging Plants.

1,000,000 Apple Seedlings from one to three years old.

50,000 Sugar Maple Seedlings two years old.

Those wishing to purchase will find it for their interest to either examine our stock or communicate with us. Catalogues sent to applicants.

STEPHEN HOYT & SONS,
New Canaan, Ct., August 10th, 1863.

FRUIT AND ORNAMENTAL TREES. RARE CHANCES OFFERED.

200,000 Choice Fruit Trees, Vines, etc., for sale, of varied size to suit customers.

The subscriber calls attention to his unusually large stock of well grown trees now on hand, and especially to the present stock of the STANDARD FRUIT, APPLE, which is the largest and finest ever offered at these Nurseries.

With twenty years of experience, by careful observation and judicious selections, he believes he is able to judge and furnish what will suit his customers, as well as the varied soils and localities, in which trees may be wanted. There is also special attention paid to local varieties, adapted to Southern and Central Pennsylvania, many of which have proven themselves more valuable, than those originating in a climate differing so widely from these sections.

He is also preparing a list of CLUB PRICES for those who purchase direct from the proprietor, offering rare inducements for neighbors to join together and get trees considerably under the regular retail prices.

This mode is adopted for those who may not have an opportunity to purchase from his regularly authorized agents, and hold a mistrust towards the too numerous tree vendors spread over the land.

The frequent use made of his name and establishment by strangers, to effect sales where the reputation of the nursery is known, compels him to warn all not to purchase—as coming from these Nurseries—stock offered by PRETENDERS, who do not hold an authority from the proprietor. Local or stationed agents will be accepted, but neither traveling nor stationary agency inquiries will receive notice, unless the parties produce satisfactory reference as to their honesty in dealing with customers and employer. Send for Catalogues and priced List, which contain inducements not before offered by him. ABUNDANT and TRUSTWORTHY REFERENCE WILL BE FURNISHED TO ALL WHO ARE STRANGERS TO THE ESTABLISHMENT.

Address DAVID MILLER, Jr.,
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THE NEW EARLY GRAPE, THE ADIRONDAC,

For sale by

J. W. CONE, Norfolk, Ct.

The Adirondac is an early grape of rare excellence, resembling the celebrated hot house grape Black Hamburg. Skin thin and brittle, almost pulpless and very sweet, ripens from one to two weeks before the Delaware or Hartford Prolific, is double the size of the Delaware, hardy, prolific and a vigorous grower, has a perfectly melting juice with a flavor of the most delicate and excellent character.

SEND FOR A CIRCULAR AND PRICE LIST.

Mr. J. W. Cone of Norfolk, Ct., is my General Agent for the sale of the Adirondac Grape Vines in the state of Connecticut, and will be prepared to supply all orders both at wholesale and retail.

JOHN W. BALLY,
Plattsburgh, N. Y., Sept. 4th, 1863.

ADIRONDAC GRAPE.

The earliest and best Native Grape of the most delicate flavor, equal to the best Vinery Grapes, without pulp, and ripening 2 or 3 weeks earlier than the Delaware.

2 years old No. 1, very strong, \$5. No. 2, \$4. 1 years old

No. 1, very strong, \$3. No. 2, \$2. All cut back to 3 or 4 eyes.

Vines will be packed in the best manner and forwarded by express, or small vines by mail if desired. Apply with remittance to

JOHN W. BALLY,
Plattsburgh, Clinton Co., N. Y.

True Delaware Grape Vines,

Propagated from the original vine, 25 to 50 cts., single; \$2 to \$4 per dozen; \$30 to \$36 per 100. Strong two and three years old vines, and extra layers for immediate bearing, at low rates. Also choice plants of Concord, Diana, Rebecca, Hartford Prolific and all other valuable varieties. Send stamp for Descriptive Catalogue to

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Grapes for the Million.

ROGER'S HYBRIDS Nos. 4, 15, and 19. The largest lot in the State from wood of Mr. Rogers. Also buds of same at best rates. Also Concord for Vineyards or in smaller lots. Also 20 other popular varieties. All unsurpassed in quality and price. Send for trade list.

LINDLEY & HINKS,

"Bridgeport Nursery" Bridgeport, Conn.

DUTCH BULBOUS ROOTS.

J. M. THORBURN & CO.'S

Catalogue of AUTUMN BULBS.

With directions for their Management
has just been published and will be
mailed free to all who apply for it.

BEAUTIFUL COLLECTION OF BULBOUS ROOTS.

No. 1.—ASSORTMENT OF

6 Fine Named Double and Single Hyacinths, for pots, glasses, or open border.
1 Polyanthus Narcissus..... \$1.25
3 Double Tulips.....
12 Fine Mixed Crocus.....
1 Bulbocodium Vernum.....

No. 2.—ASSORTMENTS OF

9 Fine Named Double and Single Hyacinths, for pots, glasses or open border.
6 Fine Double Tulips.....
15 Beautiful Named Early Tulips..... \$3.00
25 Fine Mixed Crocus.....
3 Polyanthus Narcissus.....
6 Double Narcissus.....
8 Bulbocodium Vernum.....
3 Persian Iris.....
12 Double Snowdrops.....

No. 3.—ASSORTMENT OF

18 Fine Named Double and Single Hyacinths, for pots, glasses or open border.
50 Fine Mixed Crocus.....
24 Beautiful Named Early Tulips..... \$7.00
12 Fine Named Double Tulips.....
4 Polyanthus Narcissus.....
12 Double Narcissus.....
3 Persian Iris.....
3 English Iris.....
1 Crimson Crown Imperial.....
6 Bulbocodium Vernum.....
25 Double Snowdrops.....

MAHALEB CHERRY PITS.

\$1.00 per quart, \$25.00 per bushel.

FRESH PEAR SEEDS.

Our new crop will be ready about the first part of November. Price \$3.00 per pound, or for quantities of 25 pounds or over, the price will be \$2.25 per pound.

J. M. THORBURN & CO.,

Importers and Growers of Seeds,

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Delaware Grapes.

After some years of experiment, the subscribers have adopted a mode by which they can produce plants of this valuable grape with abundant fibrous roots at the following very low rates:

1st Class, \$25 per 100. } 2nd Class, \$15 per 100.
\$300 per 1000. } \$100 per 1000.

Of these one year old, they can furnish 50,000 deliverable in October and November.—These vines are not grafts, but are raised direct from cuttings.

Those who wish to plant largely will do well to examine this Stock before purchasing, and to send their orders early as the demand last year exceeded the supply.

Those who wish can also see THREE ACRES of Delaware Vineyard in full growth.

CONCORD and other Grapes furnished by the 100 or 1000.

Address PARSONS & CO.,

Flushing, N. Y.

GRAPE VINES.

Our stock of DELAWARE, CONCORD, DIANA, HARTFORD PROLIFIC, CREVELING, ELSINBERG, HERBEMONT, LOGAN, TO KALON, UNION VILLAGE, CUTAHOGA, REBECCA, ANNA, TAYLOR or BULLIT, and all the other leading kinds, is unsurpassed any where in the country.

Parties wishing to purchase, and who cannot visit our grounds, to examine our vines and vineyards, where all the above, and many other kinds may be seen in fruit, would do well to send for our NEW PRICE LIST, which will be sent to all applicants free of charge.

J. KNOX,

Box 155, Pittsburgh, Pa.

New Japan Grape.

Although their stock is small the subscribers desire to disseminate as soon as possible the valuable

YEDDO GRAPE,

They will therefore dispose of a few plants to the first who apply. The plants will be cut down to two eyes and their price will be

TEN DOLLARS EACH.

Address PARSONS & CO.,
Flushing, New-York.

GRAPE VINES.

Planters and Dealers will please send to WM. PERRY & SON, BRIDGEPORT, CONN., for their price list for 1863. CONCORD and DELAWARE Vines of superior quality, at low rates.

NATIVE GRAPE VINES.—Strong plants in pots from bearing vines. Delaware \$30 per 100, Maxatawny \$25 per 100, Catawoga \$4 per dozen from the open ground, Concord \$12 per 100. Terms cash. JOSEPH KIFT, Westchester, Pa.

DUTCH FLOWER ROOTS.

B. K. BLISS,
Seedsman and Florist.

SPRINGFIELD, MASS.

Would respectfully inform his friends and patrons of the arrival of his annual importation of **Bulbous Roots**, and is pleased to say that they are particularly fine this season. This selection has been made with great care from one of the oldest and most respectable growers in Holland, and can be recommended with confidence, as being in every way worthy the attention of Amateurs and others interested in their culture. The stock comprises all the most desirable varieties of

Hyacinths, Double and Single. **Tulips**, Double and Single, Early and Late. **Crocus**, all of the old, and many new varieties. **Crown Imperials**. **Polyanthus Narcissus**. **Double Roman and Paper White Narcissus**. **Jonquils**, Double and Single. **Japan Lilies**. **Ranunculus Anemones**. **Arum**. **Snow Drops**. **Iris**. **Grape and Musk Hyacinths**, &c., &c. A descriptive priced Catalogue of which, with full directions for culture, will be forwarded to all applicants on receipt of a three cent postage stamp.

Bulbous Roots by Mail,

Post-paid to all parts of the Union, where there is postal communication.

THE NEW POSTAGE LAW authorizes the sending of **BULBS, PLANTS, ROOTS, CUTTINGS and SEEDS** by mail, upon pre-paying the postage at the rate of two cents for every four ounces in weight. To meet the wishes of those who reside at a distance, we have prepared the following collections with full directions for culture, which will be sent by mail post-paid, or by Express, as the purchaser may direct, at the prices affixed.

COLLECTION No. 1, by Express \$20, by Mail \$22, contains 50 Double and Single Hyacinths, 60 Double and Single Tulips, 24 Narcissus, 5 Crown Imperials, 12 Jonquils, 150 Crocus, 5 Peonies, 4 Japan Lilies, 13 Iris, 25 Ranunculus, 25 Anemones, 20 Hardy Gladiolus, 4 White Lilies, 1 Liliun longiflorum, 1 Liliun croceum, 12 Hyacinths.

COLLECTION No. 2, by Express \$10, by Mail \$11, contains 25 Double and Single Hyacinths, 30 Double and Single Tulips, 12 Narcissus, 2 Crown Imperials, 3 Jonquils, 75 Crocus, 2 Peonies, 2 Japan Lilies, 6 Iris, 12 Ranunculus, 12 Anemones, 6 Hardy Gladiolus, 2 White Lilies.

COLLECTION No. 3, by Express \$5, by Mail \$5.50, contains 10 Double and Single Hyacinths, 30 Double and Single Tulips, 6 Narcissus, 1 Crown Imperial, 3 Jonquils, 36 Crocus, 1 Peony, 1 Japan Lily, red, 4 Iris, 6 Ranunculus, 6 Anemones, 6 Hardy Gladiolus.

COLLECTION No. 4, by Express \$3, or by Mail \$3.25, contains 6 Double and Single Hyacinths, 20 mixed Tulips, 6 Narcissus, 20 Crocus, 3 Hardy Gladiolus, 1 Japan Lily, white. The different varieties in the above collections will embrace all the various colors.

For a more particular description of the collections, see Catalogue.

All of the Bulbs named in the Catalogue will be mailed post-paid at the prices quoted, for orders amounting to \$1.50 and upward, the freight on all parcels by Express, to be paid by the purchaser.

B. K. BLISS, Springfield, Mass.

BULBS**For Fall Planting.**

My Annual Illustrated and Descriptive Catalogue of **BULBS—HYACINTHS, CROCUSES, TULIPS, JAPAN LILIES, &c. &c.**, is now published and will be sent free to all who desire a copy. Address

JAMES VICK,
Rochester, N. Y.

ANTI-FRICTION LEVER HORSE POWERS, AND BURR STONE MILLS,

which may be driven by

HORSE, WATER, or STEAM POWER.

Send for Circular to

E. H. BENNET,
42 and 44 Greene-st., New-York.

POTATO DIGGERS.

CHICHESTER'S combined Hilling, Hoeling and Potato Digging Machine. Price \$25.
BYRAM'S combined Potato Digger and Double Mould-board Plow. Price \$7.

Manufactured and sold only by
GRIFFING, BROTHER & CO.,
60 Courtland-st., New-York.

Cider Mill Screws.

We are making THE CHEAPEST AND BEST CIDER MILL SCREWS IN THE WORLD. Whole length, 4 feet. Length of thread 3½ feet. Diameter of screw, 4 inches. Weight, including nut, 125 pounds. Price, \$3.00 each. Address
COWING & CO., Seneca Falls, N. Y.

Cider and Wine Mills.

KEYSTONE, EMERY'S & HUTCHINSON'S PATENTS.
Also
WINE PRESSES, from \$5 to \$40.
GRIFFING, BROTHER & CO.,
60 Courtland-st., New-York.



THE CHAMPION. HICKOK'S PATENT PORTABLE KEYSTONE CIDER AND WINE MILL. 10,000 in Use and Approved.

This admirable machine is now ready for the fruit harvest of 1863. It is, if possible, made better than ever before, and well worthy the attention of all farmers wanting such machines.

It has no superior in the market, and is the only mill that will properly grind Grapes. For sale by all respectable dealers.

If your merchant does not keep them, tell him to send for one for you, or write to the manufacturer yourself. Address the manufacturer,
W. O. HICKOK, Eagle Works,
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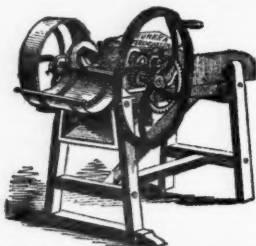
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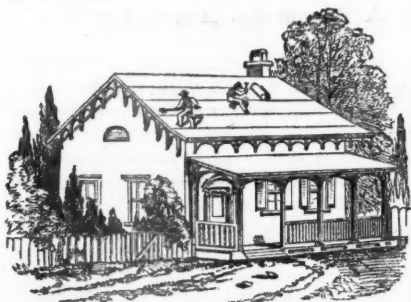
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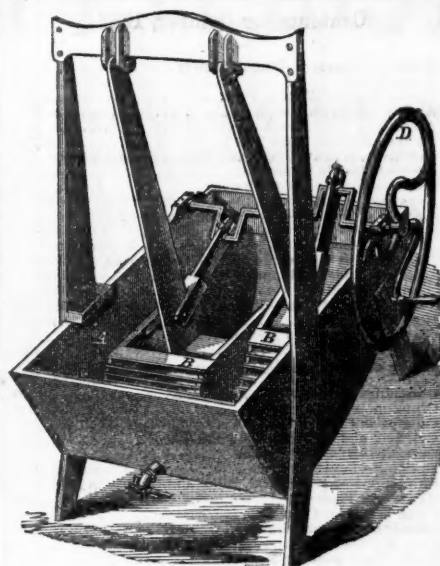
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We want a large number of new readers to see, and get acquainted with the *Agriculturist* before January, for those who do so, will generally bring along other new readers to begin with the next volume. For this reason, and as a special bounty, we make the following offer:

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A Pleasurable Announcement.

Our readers will doubtless be greatly pleased to learn of the return of Mr. Mason C. Weld, to resume his labors in the *Agriculturist* Office. A year ago he was temporarily called away, on short notice, to an important place in the country's service, and, as Lieut. Colonel of the renowned 25th Regiment Connecticut Volunteers, he has taken an active part in the restoration of Louisiana, and in the reopening of the Mississippi by the capture of Port Hudson. His regiment having served out their time and received their honorable discharge, Mr. Weld will immediately enter upon the more peaceful labor of gathering and spreading information through the columns of this journal.—Our good Agricultural Ship has never before been so well "manned" as it is now to be. With the constant and earnest editorial labors of Prof. Thurber and Lieut. Col. Weld, both of whom have had the most thorough practical and scientific training for their profession, also of Messrs. Fitch and Taber, who have long been engaged in the office, and with the efficient editorial aid of Mr. Clift, Mr. Gridley, and several other practical and intelligent observers in different parts of the country, in addition to a widely extended circle of voluntary correspondence, we feel justified in promising a still further large advance in the intrinsic value of the *Agriculturist*. Our aim is, to CONDENSE into these pages the largest possible amount of useful and reliable information upon all topics relating to the labors of the Farm, Garden and Household. To this end we shall continue to enlarge the working force. The more thought and labor we can concentrate upon the paper, the more valuable will every line become to the reader. It is not too much to say, that nowhere else can one obtain in the same space, or for so little money, so much of really valuable information. We take no little pride and pleasure in contrasting the present facilities of this journal, with what they were ten years ago when the writer was almost literally "captain, mate, and all hands."

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